



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

1880-81

SOC. OF WASHINGTON

LOGS

OF ANTIQUITY

OF

OF

OF

OF

OF

OF

OF

OF

L.SOC.
120.
146.200.1

Book

Case *13*

Shelf *3*

LIBRARY

OF THE

Peabody Museum of American Archæology and Ethnology

IN CONNECTION WITH HARVARD UNIVERSITY.

PRESENTED BY

May. J. W. Powell

Received

April 27- 1881.

8

ABSTRACT OF TRANSACTIONS

OF THE

ANTHROPOLOGICAL SOCIETY

OF

WASHINGTON, D. C.,

WITH THE

Annual Address of the President,

For the First Year, ending January 20, 1880, and for
the Second Year, ending January 18, 1881.

Prepared by J. W. POWELL.

WASHINGTON:
NATIONAL REPUBLICAN PRINTING HOUSE.
1881.

L. Sec. 120, 146, 200, 1
GIFT of J. W. Powell
Rec. 4/27/1881



ABSTRACTS OF PAPERS.
READ BEFORE THE
ANTHROPOLOGICAL SOCIETY
OF
WASHINGTON, D. C.,
FOR THE
Year Ending January 20, 1880.

FIRST REGULAR MEETING.

MARCH 4, 1879.

Relic Hunting.

By FRANK H. CUSHING.

The speaker, who has had much experience in collecting archæologic materials in the field—on the shores of many of the lakes of New York and in the valley of the Potomac—gave an interesting description of the topographic features to be observed as indices of ancient Indian village sites. His conclusions were, that the Indians in choosing these sites were influenced by a double set of motives: the first, riparian convenience, as they obtained their subsistence in large part from the water; the second, defensive advantages. He then gave the distinctive features of fortified towns as they appear from a study of their remains, and in conclusion described the communal ash-heap into which the bones, pottery, and broken implements of camp life were sure to drift.

Some Modes of Indian Burial.

By P. W. NORRIS.

Mr. Norris, the Superintendent of the Yellowstone National Park, gave a description of several modes of Indian burial that had come under his observation. He described platform burial on the prairies and plains, and believed that the Indians had adopted this method to protect their dead from the wolves.

In a second method as seen by him the body is rolled in the flayed skin of a horse or buffalo, which, on shrinking and hardening, forms an enduring shield for the body which is afterward placed in a cool, dry cavern. He had known Indians on the war-path to wrap their slain in blankets and suspend them from the branches of trees, or to lower them by lariats over inaccessible ledges where they were secure from beasts of prey.

SECOND REGULAR MEETING.

MARCH 18, 1879.

Some Indian Pictographs.

By G. K. GILBERT.

Mr. Gilbert, who, as a geologist, has traveled extensively in the southwestern portion of the United States, presented a large number of Indian pictographs collected by himself in that region.

The paper was illustrated by an extended series of Indian drawings copied from three localities, viz, Partridge Creek, on the Colorado Plateau, in Northern Arizona; Temple Creek Cañon, in southeastern Utah; and Oakley Springs, fifty miles northeast of the Moki Villages, or Province of Tusayan, in Arizona. At all of these places the drawings were made on smooth, natural surfaces of sandstone by pick-

ing with a sharp implement, a line being produced by a series of indented dots. At Temple Creek Cañon pigments were used in addition.

The drawings at Partridge Creek are grotesque, and their meaning not clear. The locality is not now inhabited, but is a common hunting ground of the Hualpais, the Avsupais, and perhaps the Tonto Apaches.

At Temple Creek the human form is many times repeated, and also a number of animals, including the mountain sheep, rabbit, bear and fox. The rainbow is drawn with three concentric lines, suggesting that three colors were recognized. The locality falls within the territory of the Utes, but numerous ruins attest the former presence of the Pueblo Indians, and the drawings are ascribed to them.

At Oakley Springs the pictures are made by Mokis, who pass that way *en route* to the lower cañon of the Little Colorado River, whence they obtain their supply of salt. Each Indian on each trip inscribes his totem *once* on the rock. The drawings successively made by an individual are ranged in a line, and show their common origin. The same token or symbol drawn by two individuals exhibits such differences as does a name in like manner among civilized people. The number of drawings is very great—2,000 or 3,000; but the number of objects represented is much smaller. The subjects most frequently presented are growing corn, rain clouds, arrows, bows, stars, the sun, bears' tracks, lizzards, masks, calabash dippers, corn-ears, squash-blossoms, houses, lightning, bird-tracks, crows, eagles, wolf-heads, and rabbits—all of which are several times repeated. It is noteworthy that one of the signs for a star is a simple cross with equal arms. Many of the totemic drawings show a conventional character. For example: The bear-tracks at Oakley Springs is a curved semi-lunar figure with five curved lines springing from the straight side and standing for toes; while the bear-track at Temple Creek is a sculpture representing the actual indentations of the sole and claws of a

bear's foot. In conclusion Mr. Gilbert stated that most of the information in regard to the Oakley Springs' etchings was obtained from Tubi, an intelligent Moki Indian, who was formerly chief of the village of Oraibi.

Observations on Aztec and Guatemalan Antiquities.

By OTIS T. MASON.

Prof. Mason exhibited two large cartoons of Aztec and Guatemalan antiquities, and stated that the object of his communication was to draw attention to Dr. Habel's paper just published as one of the Smithsonian "Contributions to Knowledge," in which a remarkable group of sculptures in southern Guatemala are described.

The author of the contribution having affirmed that the sculptures were not of Aztec origin, Mr. Mason took occasion to show that they probably were. In order to do so the attention of the society was called to various points of similarity between the symbols of the Habel sculptures and those found upon the structures of the Aztec capitol. Especial stress was laid upon the symbol for speech, which is exhibited on the Guatemalan slabs with a profusion hitherto unknown. The speaker believed this to be a purely Aztec device, and in confirmation of this view called attention to the recurrence of the same symbols in the paintings of the old *Mexican Codices*, but especially to an illustrated paper by Señor Orozco y Berra, in the fifth part of the *Anales del Museo nacional de Mexico*.

The Catholic missionaries of the sixteenth century, impatient of the delay occasioned by the difficulties of learning the language of the natives, sought to convey to them the truths of the Christian religion by symbols drawn from the paintings of the church and the Aztec iconography. In one of these manuscript pictographs illustrating the Lord's Prayer, this very symbol of speech is given in a rude form to indicate the prayer of the suppliant and the blessings of

the *padre*. The deification of the Tecpatl or obsidian knife in the Aztec mythology and in the Guatamalan slabs, was taken as an indication of the Mexican origin of the latter.

THIRD REGULAR MEETING.

APRIL 1, 1879.

Arrow-Head Making.

By FRANK H. CUSHING.

Mr. Cushing described his own experiments in making stone arrow-heads, by sudden pressure, with a sharp-pointed bone. Many Indian tribes were known to make their arrow-heads in the same manner. With specimens from the National Museum, he pointed out the different stages exhibited in the fashioning of each implement.

Indian Pictographs.

By G. K. GILBERT.

This paper was a continuation of one read at a previous meeting. As his paper was based upon illustrations presented to the society, it is difficult to give a verbal abstract.

FOURTH REGULAR MEETING.

APRIL 16, 1879.

Color-Blindness as Affected by Race.

By SWAN M. BURNETT.

Dr. Burnett gave the result of an examination by him of 3,040 pupils in the schools of negro children in the District of Columbia. He spoke of the influence exercised by

sex, giving the percentage found in over 1,200 examinations as 0.26 per cent. among females. He attributed this low percentage, as compared with the male sex, to the greater development of the color-sense in women on account of their occupations demanding a nicer discrimination of shades of colors which had been transmitted to the daughters as a sexual peculiarity. It was for biologists to determine whether a faculty, which under present conditions had no connection with the sexual functions, could be transmitted as a sexual peculiarity.

No reports regarding color-blindness as affecting the different races had been made except by Magnus Breslau. He found the Jewish children affected in about 4 per cent., whereas the Christian children closely approximated to 2.05 per cent.

Dr. Burnett found the negro children of both sexes affected to the extent of 0.78 per cent.; the boys in 1.06 per cent.; girls, 0.11 per cent. This low percentage, as compared with white children, he thought, might be referred to a largely developed capacity for color perception in the antecedents of the negroes of this country. It might be that in the earlier condition of life a good perception of color was necessary for their preservation, and naturally, under such circumstances, those survived whose faculty in this particular was most highly cultivated.

A large number of the examinations made by him were of persons of mixed blood, but often a small admixture of the blood of a race seems to carry with it an immunity from, or a tendency to, a disease (as shown by him in the case of trachoma or granular lids, from which the negro seems to be free). Hence, he infers that this may be the case in anomalies in the perception of colors in the negro race.

FIFTH REGULAR MEETING.

MAY 5, 1879.

Progress of Archæologic Research in the United States.

BY WILLS DE HASS.

Dr. De Hass' paper was an interesting historical review of the more important discoveries in the United States.

The Old Roman Senate: A Study of Deliberative Assemblies.

BY J. HOWARD GORE.

Prof. Gore sketched the development of the legislative government of Rome, showing that the Senate originated previous to the foundation of Rome, and that Romulus merely transferred the earlier custom.

The first subject which occupied the attention of the Senate was the addition of members from the allied tribes.

The political ascendancy was modeled after the family, at first having as a head the King, afterward the Senator, who was the first *Censor*. Subjects for discussion were introduced by the King, afterward by the Council, next by any magistrate.

All measures had to be ratified by the people before they became operative as laws.

The mode of voting was formerly by passing to different sides of the house; then by voices, and lastly by ballot.

In its glory the Senate exercised more power than the British Parliament, and better represented the people than any assembly since organized, unless that of France be excepted. No legislative government ever possessed so strong a balance of power.

Indian Color Names.

By ALBERT S. GATSCHETT.

Mr. Gatschett's paper contained an enumeration of twenty or twenty-five color-adjectives in the following Indian languages: Klamath of Oregon, Nez Percés, Shawnee, Atfalati branch of the Kalapiuyan family, Michopdo, of California, Santee, of the Dakotan, and Muskokian.

The conclusions arrived at were, that in the dialects considered no real word for color, in the abstract, exists; that the Indians use as many names, and, therefore, recognize as many color distinctions as we do; that many of their names, however, designate checkered or medley colors; that yellow and green sometimes coincide, both being referred to the color of the grass; that blue and green sometimes coincide; and, finally, that Indians start from other principles than ours in naming their colors.

SIXTH REGULAR MEETING.

MAY 20, 1879.

Indian Pictographs in New Mexico.

By MILES ROCK.

Nineteen of the more distinct etchings presented by Dr. Rock were found and copied in September, 1878, at the west entrance of Cook's Cañon, about nine miles west of old Fort Cummings, in Grant County, southwestern New Mexico.

They were found on the perpendicular faces of an outcrop of sandstone at the top of a foot-hill of which Cook's Peak is the highest point. There were a great many symbols in all stages of obliteration by weathering. The most distinct and deepest cut were two Greek crosses, each surrounded by a line fringing the arm at each angle. There was also a Roman cross supported by two braces, a human face, a jack-rabbit, four five-toed foot-marks, a running snake, and per-

haps a Spanish bayonet-plant, a stream of water with a spring near the bank, a steel trap, a rude representation of a cañon blocked up by a snow-drift, and a snake at a nest of eggs.

Of the six remaining etchings Mr. Rock withheld his opinion. As these remains are in the territory of the Apache Indians, he attributed the work to them, and also suggested that the early Spanish missionaries may have made the crosses, as they were more sharply cut and exact than the others.

The slope below these remains was littered over with flakes of agate and chalcedony and a profusion of pot-sherds—both plain and colored. There were, also, several mortars excavated in the rocks of the cliff.

Aboriginal Paint Quarry.

By ELMER R. REYNOLDS.

Mr. Reynolds spoke of the discovery of an aboriginal paint quarry near Bladensburg, Maryland, made in February last while searching for the site of an old encampment among the hills southeast of Benning's Bridge. The abandoned quarry is situated near Indian Springs on the estate of Rev. R. W. Lourie.

The stone was found in piles on the summit of the hill above the spring. The mineral seemed richly freighted with iron. Some of the masses presented every appearance of having been subjected to some great test of heat, as they were twisted and honey-combed into a variety of fantastic shapes. The speaker did not ascribe their igneous feature to the Indians, but attributed it to some geological agency.

The pigments are found in the cavities of the rock when broken up. They are crimson and orange, and are bright and vivid. Other shades were also observed, ranging from carmine to a delicate purple.

Fragments of paint-rock from the ancient villages along the Anacostia River were also exhibited. They were considered to be identical in composition with the specimens obtained at the quarry. With them were found paint mortars and pestles, showing plain evidences of their use.

French and Indian Half-Breeds of the Northwest.

By VICTOR HARVARD.

[Read by the Secretary.]

Surgeon Harvard of the Army presented a statistical account of the *metis*, or mixed progeny of the old French *voyageurs*. The whole number of individuals resulting from these unions amount to 32,921 for the Northwest Territory of the United States and British America.

The author gave a detailed account of the States and Territories where the *metis* are found, and described their physical and mental characteristics, as well as their arts and industries.

The author concludes while the Indian population as tribal organizations are gradually passing away, there still remains a strong infusion of Indian blood in the people of our States and Territories.

SEVENTH REGULAR MEETING.

JUNE 3, 1879.

Comparative Mythology of the Two Indies.

By GARRICK MALLERY.

Colonel Mallery suggested that Müller, Coxe, and some other authors on comparative mythology, would have modified their ruling theories if they had possessed more knowledge of the actual beliefs of our North American Indians. The latter have exhibited in their several stages

of savagery and barbarism, not only the repulsive details of actual fetichism, but its survival in higher forms; not only the worship of animals, and, indeed, of all imaginable forces, in explanation of phenomena, but seem, in the more advanced stages of their myths, to have mounted those loftier heights of nature-worship from which the students of Aryan records have traced the classic tales of Greece and Rome, as well as the gloomier beliefs of Scandinavia. If it is true that our Indians reached what we call oriental nature-myths, out of the two successive planes of fetichism and animal worship, the popular authors may be wrong in supposing that the adoration of the sun and moon in their daily and seasonal motions was the primordial religion, and that fetichism, zoölatry and anthropomorphism appeared only in the degradation of thought and language. A thorough examination of our continent's myths shows that they contained all the pristine forms of superstition, such as ancientism, metempsychosis of man and beast, apparitions and sorcery, oracles and disease-possession; and, further, that several of the linguistic families here had begun to approach the religious plane of our own distant forefathers whose records have lately been rescued for our study by the translation of the Veda, the Zend Avesta, and Tripitaka.

Most of the earlier writers on the religion of our Indians were missionaries, who, unacquainted with the truths of evolution, applied the theory of degradation to all who differed with themselves. Convinced that their own religion was pure and natural, that is, divinely revealed, it was their object to find concordance in the cis-Atlantic faiths, also supposed to be "natural," though, for want of a written bible, not preserved in purity. Hence, all matters bearing on the religions of North America, and especially on the existence of any personal or definite God, were examined and repeated with error and distortion.

A large number of the now accurately translated myths and traditions of the Algonkian, Iroquoian, Cherokian, Muskokian, Dakotan, Tsinukan, and other families were analyzed

with the result that they exhibited the essential characteristics, extending even to curiously minute details, of those traced to the extinct dwellers upon the foot-hills of the Hindu Kush. These resemblances in philosophy and psychology are too numerous and obvious to be merely accidental, and no theory has of late been advocated of any migration or transplanting which would satisfactorily account for them. They present an argument that the philosophy, which includes religion of savagery and barbarism, as stages in humanity, is substantially the same everywhere and at all eras of the world, and that it is neither the *débris* of some primeval universal revelation, nor the apotheosis of history, but is simply an attempt to account for such phenomena as were observed. This attempt was naturally made in a similar manner by people in like circumstances of environment and development. It may also be deduced that the nature-worship and linguistic schools of mythology are in error in attributing fetichism and zoölatry to the degradation of thought and language, as they appear to be antecedent stages from which the old Aryans had advanced beyond most of our Indians in about the same degree as they had progressed beyond them in civilization. The comprehensive study of comparative mythology shows little evidence of degeneracy, but wide spreading and systematic evolution.

Aboriginal Cemeteries near Piscataway, Md.

BY ELMER R. REYNOLDS.

The cemeteries are situated on a low range of foot-hills between Farmington and Piscataway, in Prince George County. Capt. Dent P. Holton was led to their discovery by finding bones exposed after a heavy rain. Upon digging, many objects are brought to light—among which are axes, arrow-heads, spear-heads, pipes, knives, coins of the time of Charles II, beads of bone, shell, amber and chalcedony,

with an occasional glass bead—also Venetian polychromes of “star pattern.” In a separate grave (a cache probably) were found a large number of finely finished quartzite knives. An ossuary was found in which were the remains of an entire family. The irregular bones were placed in the bottom and were partially destroyed by fire. The long bones were placed in the middle stratum and the crania on top.

EIGHTH REGULAR MEETING.

JUNE 17, 1879.

On the Zoological Relations of Man.

By THEODORE GILL.

Professor Gill commenced with a notice of the views that had been entertained by naturalists and anthropologists respecting the relations of man to animals. These were very diverse and covered almost every possible ground, from the conception of the human subject as the representative of a genus collateral with others, (as by Linnaeus,) to that of his exclusion from the kingdoms of nature and his reference to that of spirits (as by Swainson). Those that had found most general acceptance, however, were at first Blumenbach's and Cuvier's, that man was the representative of a peculiar order adjoining that containing the apes and lemurs, and later that he was the type of a peculiar family of the order of primates collateral with the apes and monkeys of the old and new worlds.

Which of these views appears to be the most probable was the subject for consideration.

The speaker then recapitulated the most important and significant features in the morphology of man. The relative degree of value of such characteristics was next discussed,

and the successive stages of probable evolution, from the tunicate type upwards, indicated.

The conclusions from the data at hand were given as follows:

In fine, we are compelled by the force of the evidence to recognize a close relationship with the apes, and to admit the probability of our derivation in common with the Chimpanzee and Gorilla from a common ancestor, which must have been very like the latter animals. The different stages through which man was evolved and become differentiated can even be surmised with much probability. Our pithecoïd ancestors doubtless began at length to resort, more and more, to the use of their hands for various purposes and among others for the employment of weapons of offense and defense. The shorter arms would then be more efficient than the long ones of the primitive primates and their abbreviation would therefore ensue. The more the hands were used for grasping, and discontinued for progression, the more delicate they would become. The withdrawal of the fore members from locomotion, and the continuous assumption of an erect attitude and balancing thereby would entail, among other characters, a sigmoid flexure of the vertebral column and a development of the muscles from the buttocks and calves. The same cause, in combination with the specialization of the hands, and the more exclusive use of the feet for walking and sustaining the whole body, would in time result in the parallelism of the great toe with the others. Concomitant with all these modifications would be the reduction of the canine teeth. These being, finally, comparatively little used as weapons of warfare or for procuring food, would gradually become reduced in size, and at length little protuberant beyond the others. The diastemas in the opposite jaws being then useless the same would shrink and the rows of teeth in the upper as well as the lower become continuous. There would then, also, be no need of the powerful temporal and masseter muscles, and, consequently, they would shrink in size, and with them would, likewise

become atrophied the long crests to which they were attached. The result of such change would necessarily be reduction of prognathism and the vertical development of the face. The physical modifications and the intellectual would meanwhile be interacting on each other and an enlargement of the brain, and, consequently, the cranial cavity would result. The form and proportions which the anthropoid pithecoïd and pithecoïd anthropoid as well as primitive man had attained, would render a dorsal position, in rest, the most natural. The result of such a position long continued would be a decrease and ultimate disappearance of the hair on the back, and in association therewith a sparseness on the rest of the body, except on the head, wherever its use as a protection against the sun would preserve it. That on the face would be cultivated in the male as an ornament and evidence of virility. MAN would be the final product of all these agencies. The last stages in this evolution could only have taken place in a tropical country. It is probable that Africa might have been the specific one, and that from this birth-place of the human race emigration has peopled all other lands.

NINTH REGULAR MEETING.

OCTOBER 7, 1879.

An account was given by the chair, Vice President Mallery, of the proceedings of the Anthropological Section of the American Association for the Advancement of Science at its meeting held at Saratoga, New York.

Prof. Mason gave an account of the proceedings of the Danish Historical Society as related to the preservation of ancient monuments. He reviewed the laws passed within the last two or three centuries relative to the preservation of national remains, and showed that these laws had arisen through a desire to preserve from mutilation these records

of the ancestral people of Denmark. Formerly, he observed, the restoration and care of Danish antiquities were governed by a rude and uncertain system, through which local authorities were permitted to indulge their antiquarian taste in restoring architectural and other remains. This law, however, being subject to abuse, the Crown took entire possession of all such national monuments.

Mention was made of the unjustifiable destruction of the unique mound at Circleville, Ohio; the Kahokia mound, near St. Louis, Missouri, and other mounds in the valley of the Mississippi. He recommended and strongly urged the society to submit a memorial to Congress for the purpose of arresting the vandalism exhibited in the needless destruction of our prehistoric remains.

The chairman said that Mr. Mason's suggestion met with his hearty approval, and thought that the society ought to prepare a memorial on the subject and submit the same at an early date to the National Legislature.

Mr. Reynolds gave a brief resumé of his summer's research among the aboriginal remains on the lower waters of the Potomac. His explorations commenced in the shell-beds of King George's County, Virginia. Thence he crossed to Charles County, Maryland, and carefully examined the stupendous shell-heap and mound at the confluence of Pope's Creek and the Potomac. Subsequently he visited the site of an ancient Indian town near Centreville, in St. Mary's County, on the headquarters of the Wicomoco River. Here were found pestles, grooved axes, arrows, knives, spears, cylindrical stone beads, Venetian polychrome beads, and several spheroidal stones quite symmetrical, and found hitherto only on the Pacific Coast. During this and a subsequent visit the speaker succeeded in discovering many shell-heaps between Allen's Fresh and the mouth of the Wicomoco River.

TENTH REGULAR MEETING.

OCTOBER 21, 1879.

**The Sign Language of the North American Indians.**

BY GARRICK MALLERY.

The design of this paper was to illustrate the gesture-speech of mankind. After tracing its history, so far as known in other parts of the world, the theory was controverted that the power of the visible gesture relative to, and its influence upon, the audible word was inversely proportioned to the development of the oral language. The travelers' tales of people unable to understand their mother-tongue in the dark because of their inability to see the accompanying gestures, were of doubtful truth anywhere, and certainly false as regards the American tribes, many of those that gesture most freely having a copious vocabulary with highly differentiated parts of speech. The true distinction is that where the number of men speaking the same dialect is small, and when they are thrown into contact on equal terms with others of different tongues, gesture is necessarily resorted to for converse; while large bodies enjoying a common language, and either isolated from foreigners, or if in contact with them, so dominant as to compel the learning and adoption of their own tongue, become impassive in its delivery. Instances of this from the Old World were presented. But nowhere as on our continent was there spread over so vast a space so small a number of individuals, divided by so many linguistic boundaries. The general use of signs originating from the necessity for extra-tribal communication became also convenient for the habits of hunters and the military tactics of surprise. So, naturally, the practice of a sign language among our Indians is noticed by all travelers, and the assertion has been current that it was a single universal code. To test this remarkable statement a number of sign vocabularies taken in different parts of the country and at remote

dates were collected by the speaker, comprising more than eight hundred signs. The result is that there is often an entire discrepancy between the signs made by different bodies of Indians to express the same idea. Very few of the limited number of gestures that are in general use are at all conventional, being only portions more or less elaborate of obvious natural pantomime; and those proving to be the fittest expressions of the several ideas become the most widely adopted. In some cases the original air pictures of an outline or action have become abbreviated; and even if both the original conception and delineation were at first the same, the two or more abbreviations became unlike. The first conceptions were also often diverse, because all objects have several characteristics, and what strikes one set of people as the most distinctive will not always so impress another.

The speaker gave from the collected lists, or vocabularies, a large number of examples where either the conception or execution, or both, to express the same idea are widely diverse. Also a number of typical cases of agreement, followed by illustrations of others not remarkable either for general or limited acceptance, but for the philosophy or poetry suggested by their picturesque figuration. Some of these were compared with the gestures of savage and civilized people in the Old World; with those of deaf mutes; with the code of the Cistercian monks, who were vowed to silence; and with the picture writing on buffalo robes and on Egyptian pyramids. The general result proved that there was no uniformity in detail, but the variety in expression was in itself of great psychological interest. While the assertion of a single universal sign-language among the tribes is, therefore, one of the popular errors about our aborigines, it is, nevertheless, true that the attempt to convey meaning by signs is universal among them; and further, two intelligent pantomimists, whether Indian or Caucasian, deaf-mute, or without common tongue, will seldom fail of mutual understanding when their attention is exclusively

directed to expressing thoughts by means of comprehension and reply equally possessed by both, without the mental confusion of conventional sounds only intelligible to one.

ELEVENTH REGULAR MEETING.

NOVEMBER 4, 1879.

Poisoned Weapons of North and South America.

BY W. J. HOFFMAN.

This paper was an historical review of the accounts which various travelers and writers have given of the use of poisoned weapons and the antidotes therefor, discovered in North and South America.

The Use of Agricultural Fertilizers by the American Indians and the Early English Colonists.

BY G. BROWN GOODE.

This paper has been published in full in the *American Naturalist* for July, 1880.

TWELFTH REGULAR MEETING.

NOVEMBER 18, 1879.

A Comparison of a Written Language With One That is Spoken Only.

BY OTIS T. MASON.

The Rev. Cyrus Byington, in the introductory chapter of his Chata (Choctaw) Grammar, draws attention to the fact that this is merely a spoken language, and must not be gauged by the ordinary critical tests of a written language. This

observation led the speaker to inquire what are the essential differences between a language merely spoken and one that is also written.

In a spoken language there are two agents at work, the speaker and the hearer. The former is the creator of language, as well as its progressive or destructive agent. The latter is the preserver of language, being its conservative and defensive agent. It is evident that a language at any period of its history is a compromise between these two opposing forces. Again, the amount of usefulness in a purely spoken language must be exceedingly limited, being measured by the ability of its conservators to remember what is said, in conjunction with the manner of saying it. The compass of such a speech, the definiteness and variety of expression, must be exceedingly circumscribed.

When we combine the writer and the reader with the speaker and the hearer, we have four forces in place of two; we add another aggressive and another conservative agency, and the status of the language at any period will be a compromise of a more intricate character. The aggressiveness of the writer is generally much less than that of the speaker, and also the preservative power of written language is immensely greater than that of pure memory among a people without writing. We ought to find, therefore, that the invention of the art of writing has had a tendency to place speech upon a more stable basis. The invention of the written symbol is itself a confession of the inadequacy of the old method, and would never have taken place if the improved status in culture had not called loudly for linguistic facilities which speech alone did not furnish.

Again, the means of retaining before the mind a great number of facts leads to the improvement of observation and classification, the readjustment of the categories of thought, and, consequently, the recompounding of words upon a more scientific basis. The chief improvement, however, is in the sentence. The spoken thought is but breath "that flits ere you can point its place;" but the written sentence is like

the painter's canvas, ever on the easel, and may be retouched at any moment, even after the death of its author. This fact leads to the differentiation of the parts of speech, enables a people to increase the number of sentential functions, and to define their limits; to vary the composition and collocation of the terms which express these functions; to answer the demands of rigid logic by a better separation of subject, predicate, and modifier; and, finally, to add strength and beauty to mere utterance by an infinite variety of purely rhetorical devices.

There is no doubt that writing, in addition to being the vehicle and instrument of thought, is itself a factor in the problem of civilization, not only borrowing its improved form from an improved culture, but itself reciprocating the favor in contributing to human advancement.

On the Aboriginal Shell-Heaps at Pope's Creek, Maryland.

By ELMER R. REYNOLDS.

Mr. Reynolds discovered these shell-heaps in 1878. They are sixty miles south of Washington, at the confluence of Pope's Creek and the Potomac River, in Charles County, Maryland. They are situated within the territory of the Yoacomico Indians, whose headquarters were near the present site of St. Mary's, south of Wicomico River. An account of these Indians may be found in Father White's *Relatio Itineris in Marylandiam*. Between 1634 and 1640 the Yoacomico Indians ceded their land to the Colony of St. Mary's, after which they gradually disappeared as a tribe, although many of their descendants remain near Allen's Fresh, Port Tobacco, and Nanjemoy.

There are two of these shell-heaps, the larger one lying on the north side of the creek, and the smaller, but more interesting one, on the south side. In the former the shells occupy the summit of a hill about 25 feet above tide-water

and 300 feet long. The bank is from 3 to 5 feet in depth on the creek, but becomes more and more shallow and extended laterally until it is lost in the surrounding fields.

The southern shell-heap rests on a lower spur of the hills which bound the creek. It is probably about 150 feet long, 100 feet wide, and 4 feet deep. These dimensions are roughly estimated, as, owing to an overlying stratum of earth from 2 to 24 inches in thickness, accurate measurements are difficult.

Both of these banks are composed of oyster-shells, in many places packed together. Although they are undoubtedly of pre-Columbian origin, there is nothing to indicate a very high antiquity. From the absence of broken shells in any great numbers, it seems probable that the oysters were steamed or roasted before they were removed from the shells.

The contents of the heaps were a few bones of the turtle and of the deer, rudely flaked arrow-heads, axes and celts, hammer-stones, and pottery. Many of these objects also occur on the surface, and seem to be more highly finished than those of the shell-heaps.

The earthenware belongs to the class known as basket-pottery, and shows the meshes of the rush moulds in which the vessels were formed. The fragments recovered are nearly an inch in thickness, and in several instances flaked and blistered by the long-continued action of fire. The ornamentation is in intaglio, and presents the endless variety of curves and chevrons which we are accustomed to see on ware of this class.

The author discusses in the course of his remarks the question of the disappearance and reappearance of oysters in certain localities in connection with the occurrence of the signs of stratification in the shell-heaps.

THIRTEENTH REGULAR MEETING.

DECEMBER 2, 1879.

Ancient Maps of North America.

BY JOHN C. LANG.

Maps bear the same relation to the history of geographic discovery that portraits do to biography. Historians find in charts of the early explorers historical documents easily interpreted and needing no translation.

The old writer or geographer who has given us a map has furnished us a check on his verbal report. Even the compiler of a map cannot hide from us the sources of his information. As in a hall of statuary we may recognize casts from antique marbles, so upon the map we can identify and separate, if need be, the work of many hands.

But few of the cartographic representations of the early discoverers in the New World exist. It would take less time to describe the historical maps to which we can now refer, than to mention those which we know to have perished. Columbus came of a family of map-makers, and was himself an experienced cartographer, and for years carried on the work of constructing charts for sale. Previous to his memorable voyages he was doubtless an enthusiastic collector of geographic information from every available source.

In February, 1467, he visited Iceland, to examine into the facts touching upon the discoveries of the Northmen, and while there it is probable that he searched the whole range of documents necessary to his subject. At that time he was probably able to find those who remembered the visits of the Zeri Brothers, who three-fourths of a century previous had compiled from the Norse records a complete map of the coast discovered and colonized by the Norsemen three hundred years before.

Mr. Lang then presented a series of maps, published from 1436 to 1513, and by crayon sketches illustrated the progress of geographic discovery of the coast of North and South America, as exhibited in said series.

On the Effacing Power of tropical Forest-growth in Trinidad Island.

By MILES ROCK.

Columbus discovered this island in 1498. In the year 1588 the Spaniards made the settlement of Saint Joseph, on the river Maracas, an affluent of the Caroni, which empties into the Gulf of Paria near the modern city of Port of Spain. Instead of entering the Gulf of Paria and passing up the valley of the Caroni, they moored their vessels in the little bay of Las Cuevas on the north side of the island, and crossed the mountains over a pass that rises to the height of 2,000 feet in four miles. The road passes on one side of the highest peak in the island, Tucuche, or Eagle's Beak, which rises 1,000 feet above the pass and seems almost vertical.

On the other side they descended and followed the Maracas River to the last foot-hills, where they beheld the plain of Caroni. Here they built the settlement of St. Joseph.

The road over the mountain, though seldom used now, by the great amount of travel in former times was deeply worn and is now quite passable.

While laboring through the thick forests on the cape east of Las Cuevas Bay, Mr. Rock and his party stumbled upon some rusty iron cannon protruding above the ground. On this rocky headland, therefore, commanding the entrance to the bay, the Spaniards had a fort. The tropical forest has overwhelmed every vestige of its existence. With a little care it was possible to trace where a settlement had existed back of the fort. A few mango trees survive of all that once constituted this station.

The pass is still called "La Ventana," because on the way from the bay you are immersed in the sombre forest; but on reaching the top a magnificent vista of mountain, forest, and sea lies at the feet.

In 1676 the French took possession of the island and held it until 1797, when it fell into the hands of the British. By this time Port of Spain had replaced St. Joseph, and the latter was buried in the common forest growth.

Not over fifty years ago Las Cuevas was a sugar plantation. It was then abandoned and remained uncultivated until a few years since, when it was bought for a cocoa orchard. Everywhere an impenetrable forest shut out the sun, and no evidence could be found that it had been the abode of man.

On the Determination of the Age of Prehistoric Remains.

By EDWARD P. LULL.

To illustrate the caution that should be exercised in estimating the age of prehistoric remains from their state of decay and the appearance of the covering of earth, vegetable growth and forests, Commander Lull gave an account of some observations made by himself of the remains of a Scottish Colony, established by Patterson at Caledonia Bay, Isthmus of Darien, and which was abandoned early in the last century.

A large area on Point Escoses, occupied and fortified by the colonists, was enclosed on the inshore side by a moat excavated in rock. Thanks to the latter fact, it is distinctly traceable. The enclosed space is not only heavily timbered with exogenous trees of numerous kinds, but many of the trees have decayed and fallen. One end of the moat for an eighth of a mile, or more, is completely filled with logs and other *débris*. No difficulty was found in wading through the remaining portions. The moat being, as stated, cut through the soil and into the bed-rock offered an efficient

barrier to the spread of vegetation from the adjacent forest or the transportation of material from the same source by the wash of rains. The soil, thin as it is, probably contained a very large share of the germs which have since developed; while the wind, the birds and other animals have lent their constant aid for what further was needed. At the present time there is no vestige of this ancient work save the moat, and looking at a like heavy growth of timber in a northern climate, no doubt would be entertained that it was a forest of great age.

Just in rear of the city of Cartagena, U. S. of Colombia, there is a hill, some three hundred feet in elevation, surmounted by a castle that was one of the principal defences of the city less than half a century ago. The hillsides are now completely and heavily overgrown with a matted tangle of trees, vines, and parasites, so much so that a party attempting in 1871, to climb the hill, were obliged, with no little labor, to cut a pathway with the vigorous use of machetas, and were told by the inhabitants that no one had attempted the ascent before for years. The castle, like the city itself, with its fortified walls, its magnificent palaces, churches, and convents, monuments of the skill, energy, and lavish expenditure of the Spanish builders, is rapidly falling into ruins, and is one of the many examples of the extremely rapid progress in tropical America of the decay of the strongest works, and heaviest masonry, when left without proper care, especially exhibiting the heaving effect of vegetable growth. Woodwork has two enemies—the rapid alternation of moisture and burning sunshine, and boring insects—the latter being almost as destructive as the *teredo navalis*, though requiring a longer time for their work. The present occupants of the land make little or no effort to arrest the progress of destruction, and Porto Bello is almost as complete a ruin as Pompeii, notwithstanding the very short time that has elapsed since it was a wealthy and populous town.

The rapid accumulation of strata in localities favorably situated, and the growth of cottonwood groves on the banks

of the Mississippi river are familiar to many. The speaker had occasion the previous winter to visit several places near the mouth of the Red River where he had served, fourteen years before, during the civil war. In one place, where vessels were anchored at the earlier date, an island had formed some rods in width, leaving a little channel between itself and the main shore, and was covered with a growth of cottonwood trees, at least half as large as those of the adjacent forest. At Morganzia a large field was occupied for two or three years by troops as a camp, and was not only stripped of every tree, but was broken down by the constant march of men and teams, so that the soil must have been in a rather unfavorable condition. It was scarcely recognizable, the old camp-ground being entirely covered with trees as large as any others in the vicinity. From such observations, the speaker was led to conclude that evidences of antiquity derived from forest growth and other changes in topographic characteristics were apt to mislead archæologists.

Mr. Riley read a letter from a correspondent in San Antonio, Texas, relating to the discovery of a remarkable cave in a mountain standing in the valley of the Rio Nazas, state of Durango, Mexico. This river empties into a *laguna*, or inland sea, ninety miles long and thirty miles wide, with an elevation of about 3,000 feet above tide water; it has no outlet. The mountain in which the burial cave is found, stands near the shore of the lake. The cave is of great extent and contains hundreds of mummies, representing a distinct race of Indians of whom no history or tradition exists. Each mummy is carefully wrapped in a blanket, or mat made of the leaves of the Maquez plant and gorgeously colored with dyes and paints. The remains are in an excellent state of preservation—the hair perfect, the flesh seems to have become dessicated, or dried to the bones with no trace of decomposition. No implements of metal were found, but there was a profusion of arrows,

spears and knives, made of stone. The pottery showed a high degree of art. The vessels were large and bore a close resemblance to the decorated pottery of ancient Egypt.

FOURTEENTH REGULAR MEETING.

DECEMBER 16, 1879.

The President read the folk story of the "Tar Baby" from a copy of the *Evening Star* of Washington, D. C., and stated that he had found the same, modified in different ways, among many Indian tribes.

He also related the Indian story of the "Three Cranberries," which has an extensive circulation among the tribes of North America. In the latter story the moral is, "To escape from wolves you must climb a tree."

Turtle-Back Celts and their Uses.

By ELMER R. REYNOLDS.

The class of implements known as turtle-back celts were first mentioned by Dr. Charles Abbott in the Smithsonian annual report for 1875, and more fully described in the tenth and eleventh annual reports of the Peabody Museum.

Mr. Reynolds, in answer to Dr. Abbott's hypothesis that "each celt combines in itself a knife, a celt, and a spear," recounted his own experience in the discovery of these implements.

The objects exhibited and described were found on the site of an old Indian village, near Benning's Bridge, in the District of Columbia, where at least ten thousand other relics have been collected.

The material of the celts is a metamorphosed new red sandstone, the color having changed to a bluish grey.

In form the "turtle-backs" differ greatly from the ordinary chipped celt. The base or head of the former is where we find the blade or cutting-edge of the latter, while the head or posterior projection of the common type corresponds to the blade of the "turtle-back." The former is perfectly flat on the inferior face, the upper side being flaked into the form which its name indicates, but the chipped celt is beveled and evenly finished on both sides, so that, if it were possible to split it laterally, two "turtle-back" celts would result.

From a comparison of their form with that of many implements now and formerly known to be in use among the Indians, Mr. Reynolds concluded that these implements were hafted in the manner of a stone adze, and employed principally in excavating dug-out canoes. It was not denied that they may have been employed in all the multifarious processes to which the fertile brain of the Indian enables him to supply his scanty store of implements.

The author adverted to the canoes of the northwest coast and the sea-faring proas of the New Zealanders made with stone implements and with the help of fire.

Specimens of the "turtle-back" celts were exhibited by the speaker, some of them hafted, in order to show the design of their peculiar form. The flat side doubtless, lay against the wooden handle, and the projection on the back would impart the greatest possible strength at the very point where it was most needed.

FIFTEENTH REGULAR MEETING.

JANUARY 6, 1880.

Shell-Heaps of South River, Maryland.

By J. D. MCGUIRE.

Wherever shell-fish are found in salt or fresh waters, the lands adjacent thereto bear evidences that shell-fish were used by primitive men as articles of food.

This statement was illustrated by an enumeration of the discoveries of archæologists in Australia, New Zealand, Europe, and North and South America.

The speaker made mention of the opinions entertained by different writers in relation to the origin of the shell-heaps of the Atlantic coast and enumerated the facts by which archæologists had reached the conclusion that these shell-heaps are in reality accumulations of kitchen refuse made by the ancient inhabitants of the shores.

Mr. McGuire then gave an account of the shell-heaps examined by himself. Usually the smaller are circular or elliptical rings from twelve to fifteen feet in diameter, and show plainly that they are the sites of former dwellings. The centre of each ring is always depressed and represents an inverted cone. Upon a trench through one of these heaps there is found a level substratum of earth, but the shells increase in depth as the ridge is approached. This is sometimes four or five feet high; then they decrease in depth as the centre of the ring is reached. These rings seem to have been formed by throwing the shells from a common centre.

To account for the peculiar shape of these deposits it is necessary to consider the construction of the Indian house. There is historical evidence showing that it was made of poles with the large ends on the ground in a circle, and bound at the top with the bark of the walnut tree, and the whole covered with sedge matting sewed with a needle made of the splintered bone of a crow's leg. Doorways were covered by movable mats. His theory was that the shells thrown from such a house would gradually accumulate, forming a circular wall. When the houses were finally deserted, the action of the weather would reduce the shell wall on the exterior to the condition in which these heaps are found.

Other shell-heaps discovered by Mr. McGuire were supposed to be accumulations about large communal dwellings. In general outline they are elliptical. Low spaces in the encircling ridge mark the sites of entrances, and

hearthstones are found in the central spaces. In all the heaps examined the shells are rarely found broken. The inference was drawn that the shells had been opened after having been placed near the fire, or in hot water, so that they could be parted with the hands without the use of an instrument.

Most of the bones found had been broken, probably for the purpose of extracting the marrow. A few bone tools were found, and many fragments of pottery.

ANNUAL MEETING FOR THE ELECTION OF OFFICERS.

JANUARY 20, 1880.

A Strange Chart.

BY W. BAINBRIDGE HOFF.

Commander Hoff stated that in 1869 he was shown a chart in the Naval Arsenal, Lisbon, Portugal, that had sufficient novelty about it to be worthy of special mention.

It represented the Indian and Pacific oceans lying between, say, 30° N. and 36° S. latitude, and extending sufficiently in longitude to embrace the eastern African and Asiatic coasts and the western coast of America. It had been prepared by a Spanish Jesuit, who dedicated the chart to "Jesus Christ the Master of the World," and had preceded his signature with a prayer. The text was in Latin, and the date of the chart was somewhere in the first quarter of the seventeenth century.

The extraordinary feature of this map was that geographic positions had seemingly been laid down at random, and that any correction for latitude and longitude applied to any one point did not answer for another. Nearly all the results of late discovery were on this chart, but entirely adrift in position. This would lead to the belief that the chart had been intentionally distorted—and this proved to be the case.

The map in question was constructed upon Mercator's projection, but instead of the parallels and meridians being straight lines at right angles to one another, they were arbitrarily-drawn curves. It was of course necessary to have a key to this chart, which, upon being furnished, proved to be very elaborate. Besides giving proper diagrams of the arbitrary lines, it gave the *constants* to be applied to individual localities and their corrected latitudes and longitudes. On the chart itself was a *cryptographic* statement of the necessary *formulae* for constructing the curves geometrically, referred to the N. E.-S. W. and N. W.-S. E. points of the compass as axes.

ANNUAL ADDRESS OF THE PRESIDENT, J. W. POWELL.

THE EVOLUTION OF LANGUAGE,
As Exhibited in the Specialization of the Grammatical Processes, the Differentiation of the Parts of Speech, and the Integration of the Sentence; from a Study of Indian Languages.

Possible ideas and thoughts are vast in number. A distinct word for every distinct idea and thought would require a vast vocabulary. The problem in language is to express many ideas and thoughts with comparatively few words.

Again, in the evolution of any language progress is from a condition where few ideas are expressed by a few words to a higher, where many ideas are expressed by the use of many words; but the number of all possible ideas or thoughts expressed is increased greatly out of proportion with the increase of the number of words.

And still again, in all of those languages which have been most thoroughly studied, and by inference in all languages, it appears that the few original words used in any language remain as the elements for the greater number finally used. In the evolution of a language the introduction of absolutely new material is a comparatively rare phenomenon. The old material is combined and modified in many ways to form the new.

How has the small stock of words found as the basis of a language been thus combined and modified?

The way in which the old materials have been used gives rise to what will here be denominated THE GRAMMATIC PROCESSES. They are as follows:

I. The process by COMBINATION. Two or more words may be united to form a new one, or to perform the office of a new one, and four methods or stages of combination may be noted.

a. By *juxtaposition*, where the two words are placed together and yet remain as distinct words. This method is illustrated in Chinese, where the words in the combination when taken alone seldom give a clew to their meaning when placed together.

b. By *compounding*, where two words are made into one, in which case the original elements of the new word remain in an unmodified condition, as in "house-top," "rain-bow," "tell-tale."

c. By *agglutination*, in which case one or more of the elements entering into combination to form the new word is somewhat changed—the elements are fused together. Yet this modification is not so great as to essentially obscure the primitive words, as in "truthful," where we easily recognize the original words "truth" and "full;" and "holiday," in which "holy" and "day" are recognized.

d. By *inflection*. Here one or more of the elements entering into the compound has been so changed that it can scarcely be recognized. There is a constant tendency to economy in speech by which words are gradually shortened as they are spoken by generation after generation. In those words which are combinations of others there are certain elements that wear out more rapidly than others. Where some particular word is combined with many other different words the tendency to modify by wear this oft-used element is great. This is more especially the case where the combined word is used in certain categories of combinations, as where particular words are used to denote tense in the verb; thus, "did" may be used in combination with a verb to denote past time until it is worn down to the sound of "d."

The same wear occurs where particular words are used to form cases in nouns, and a variety of illustrations might be given. These categories constitute conjugations and declensions, and for convenience such combinations may be called paradigmatic. Then the oft-repeated elements of paradigmatic combinations are apt to become excessively worn and modified, so that the primitive words or themes to which they are attached seem to be but slightly changed by the addition. Under these circumstances combination is called inflection.

As a morphologic process, no well-defined plane of demarcation between these four methods of combination can be drawn, as one runs into another; but, in general, words may be said to be juxtaposed, when two words being placed together the combination performs the function of a new word, while in form the two words remain separate.

Words may be said to be compound when two or more words are combined to form one, no change being made in either. Words may be said to be agglutinated when the elementary words are changed but slightly, *i. e.*, only to the extent that their original forms are not greatly obscured; and words may be said to be inflected when in the combination the oft-repeated element or formative part has been so changed that its origin is obscured. These inflections are used chiefly in the paradigmatic combinations.

In the preceding statement it has been assumed that there can be recognized, in these combinations of inflection, a theme or root, as it is sometimes called, and a formative element. The formative element is used with a great many different words to define or qualify them, that is to indicate mode, tense, number, person, gender, etc., of verbs, nouns, and other parts of speech.

When in a language juxtaposition is the chief method of combination, there may also be distinguished two kinds of elements, in some sense corresponding to themes and formative parts. The theme is a word the meaning of which is determined by the formative word placed by it; that is, the

theme is a word having many radically different meanings; with which meaning it is to be understood is determined only by the formative word, which thus serves as its label. The ways in which the theme words are thus labeled by the formative word are very curious, but the subject cannot be entered into here.

When words are combined by compounding, the formative elements cannot so readily be distinguished from the theme; nor for the purposes under immediate consideration can compounding be well separated from agglutination.

When words are combined by agglutination, theme and formative part usually appear. The formative parts are affixes; and affixes may be divided into three classes, prefixes, suffixes, and infixes. These affixes are often called incorporated particles.

In those Indian languages where combination is chiefly by agglutination, that is by the use of affixes, *i. e.*, incorporated particles, certain parts of the conjugation of the verb, especially those which denote gender, number and person, are effected by the use of article pronouns; but in those languages where article pronouns are not found the verbs are inflected to accomplish the same part of their conjugation. Perhaps, when we come more fully to study the formative elements in these more highly inflected languages, we may discover in such elements greatly modified, *i. e.*, worn out, incorporated pronouns.

II. The process by VOCALIC MUTATION. Here in order to form a new word, one or more of the vowels of the old word are changed, as in "man"—"men," where an "e" is substituted for "a"; "ran"—"run," where "u" is substituted for "a"; "lead"—"led," where "e," with its proper sound, is substituted for "ea" with its proper sound. This method is used to a very limited extent in English. When the history of the words in which it occurs is studied it is discovered to be but an instance of the wearing out of the different elements of combined words; but in the Hebrew this method prevails to a very large extent, and scholars have not yet been able

to discover its origin in combination as they have in English. It may or may not have been an original grammatic process, but because of its importance certain languages it has been found necessary to deal with it as a distinct and original process.

III. The process by INTONATION. In English, new words are not formed by this method, yet words are intoned for certain purposes, chiefly rhetorical. We use the rising intonation (or inflection, as it is usually called) to indicate that a question is asked, and various effects are given to speech by the various intonations of rhetoric. But this process is used in other languages to form new words with which to express new ideas. In Chinese eight distinct intonations are found, by the use of which one word may be made to express eight different ideas, or perhaps it is better to say that eight words may be made of one.

IV. The process by PLACEMENT. The place or position of a word may affect its significant use. Thus in English we say "John struck James." By the position of those words to each other we know that John is the actor, and that James receives the action.

By the grammatic processes language is organized. Organization postulates the differentiation of organs and their combination into integers. The integers of language are sentences, and their organs are the parts of speech. Linguistic organization, then, consists in the differentiation of the parts of speech and the integration of the sentence. For example, let us take the words *John*, *father*, and *love*. John is the name of an individual; love is the name of a mental action, and father the name of a person. We put them together, John loves father, and they express a thought; *John* becomes a noun, and is the subject of the sentences; *love* becomes a verb, and is the predicant; *father* a noun, and is the object; and we now have an organized sentence. A sentence requires parts of speech, and parts of speech are such because they are used as the organic elements of a sentence.

The criteria of rank in languages are, first, grade of organization, *i. e.*, the degree to which the grammatic processes and methods are specialized, and the parts of speech differentiated; second, sematologic content, that is, the body of thought which the language is competent to convey.

The grammatic processes may be used for three purposes:

First, for *derivation*, where a new word to express a new idea is made by combining two or more old words, or by changing the vowel of one word, or by changing the intonation of one word.

Second, for *modification*, a word may be qualified or defined by the processes of combination, vocalic mutation or intonation.

It should here be noted that the plane between derivation and qualification is not absolute.

Third, for *relation*. When words as signs of ideas are used together to express thought the relation of the words must be expressed by some means. In English the relation of words is expressed both by placement and combination, *i. e.*, inflection for agreement.

It should here be noted that paradigmatic inflections are used for two distinct purposes, qualification and relation. A word is qualified by inflection when the idea expressed by the inflection pertains to the idea expressed by the word inflected; thus a noun is qualified by inflection when its number and gender are expressed. A word is related by inflection when the office of the word in the sentence is pointed out thereby; thus, nouns are related by case inflections; verbs are related by inflections for gender, number, and person. All inflection for agreement is inflection for relation.

In English, the three grammatic processes are highly specialized.

Combination is used chiefly for derivation, but to some slight extent for qualification and relation in the paradigmatic categories. But its use in this manner as compared with many other languages has almost disappeared.

Vocalic mutation is used to a very limited extent and only by accident, and can scarcely be said to belong to the English language.

Intonation is used as a grammatic process only to a limited extent—simply to assist in forming the interrogative and imperative modes. Its use here is almost rhetorical; in all other cases it is purely rhetorical.

Placement is largely used in the language, and is highly specialized, performing the office of exhibiting the relations of words to each other in the sentence, *i. e.*, it is used chiefly for syntactic relation.

Thus one of the four possesses does not belong to the English language; the others are highly specialized.

The purposes for which the processes are used are *derivation*, *modification*, and *syntactic relation*.

Derivation is accomplished by combination.

Modification is accomplished by the differentiation of adjectives and adverbs, as words, phrases and clauses.

Syntactic relation is accomplished by placement. *Syntactic relations* must not be confounded with the relation expressed by prepositions. Syntactic relation is the relation of the parts of speech to each other as integral parts of a sentence. Prepositions express relations of thought of another order. They relate words to each other as words.

Placement relates words to each other as parts of speech.

In the Indian tongues combination is used for all three purposes, performing the three different functions of derivation, modification and relation. Placement also is used for relation, and for both kinds of relation, syntactic and prepositional.

With regard, then, to the processes and purposes for which they are used we find in the Indian languages a low degree of specialization; processes are used for diverse purposes, and purposes are accomplished by diverse processes.

It is next in order to consider to what degree the parts of speech are differentiated in Indian language, as compared with English.

Indian nouns are extremely connotive, that is, the name does more than simply denote the thing to which it belongs; in denoting the object it also assigns to it some quality or characteristic; Every object has many qualities and characteristics, and by describing but a part of these the true office of the noun is but imperfectly performed. A strictly denotive name expresses no one quality or character, but embraces all qualities and characters.

In Ute the name for bear is "he seizes," or "the hugger." In this case the verb is used for the noun, and in so doing the Indian names the bear by predicating one of his characteristics. Thus noun and verb are undifferentiated. In Seneca the north is "the sun never goes there," and this sentence may be used as adjective or noun; in such cases noun, adjective, verb, and adverb are found as one vocable or word, and the four parts of speech are undifferentiated. In the Pavänt language a school-house is called Pó-künt-in-in-yî-kän. The first part of the word, pó-künt, signifies "sorcery is practiced," and is the name given by the Indians to any writing from the fact that when they first learned of writing they supposed it to be a method of practicing sorcery; in-ing-yî is the verb signifying "to count," and the meaning of the word has been extended so as to signify "to read"; "kän" signifies wigwam, and is derived from the verb "käri," "to stay." Thus the name of the school-house literally signifies "a staying place where sorcery is counted," or where papers are read. The Pavänt in naming a school-house describes the purpose for which it is used. These examples illustrate the general characteristics of Indian nouns; they are excessively connotive; a simply denotive name is rarely found. In general their name-words predicate some attribute of the object named, and thus noun, adjective, and predicate are undifferentiated.

In many Indian languages there is no separate word for eye, hand, arm, or other parts and organs of the body, but the word is found with an incorporated or attached pronoun signifying *my* hand, *my* eye; *your* hand, *your* eye; *his* hand,

his eye, &c., as the case may be. If the Indian, in naming these parts, refers to his own body, he says *my*; if he refers to the body of the person to whom he is speaking, he says *your*, &c. If an Indian should find a detached foot thrown from the amputating-table of an army field hospital, he would say something like this: "I have found somebody *his* foot." The pronominal particle should be written with the part implying the name, the whole forming but one word. It is usually very easy by inspection, to determine what pronoun is used. The linguistic characteristic is widely spread, though not universal.

Thus the Indian has no command of a fully differentiated noun expressive of "eye," "hand," "arm," or other parts and organs of the body.

In the pronouns we often have the most difficult part of an Indian language. Pronouns are only to a limited extent independent words.

Among the free pronouns the student must early learn to distinguish between the personal and the demonstrative. The demonstrative pronouns are more commonly used. The Indian is more accustomed to say *this* person or thing, *that* person or thing, than *he*, *she* or *it*. Among the free personal pronouns the student may find an equivalent of the pronoun "I," another signifying "I and you;" perhaps another signifying "I and he," and one signifying "we," more than two, including the speaker and those present; and another including the speaker and persons absent. He will also find personal pronouns in the second and third person, perhaps with singular, dual and plural forms.

To a large extent the pronouns are incorporated in the verbs as prefixes, infixes, or suffixes. In such cases we will call them article pronouns. These article pronouns point out with great particularity the person, number, and gender, both of subject and object, and sometimes of the indirect object. When the article pronouns are used the personal pronouns may or may not be used; but it is believed that

the personal pronouns will always be found. Article pronouns may not always be found. In those languages which are characterized by them they will be used alike when the subject and object nouns are expressed and when they are not. The student may at first find some difficulty with these article pronouns. Singular, dual, and plural forms will be found. Sometimes distinct incorporated particles will be used for subject and object, but often this will not be the case. If the subject only is expressed, one particle may be used; if the object only is expressed, another particle; but if subject and object are expressed an entirely different particle may stand for both.

But it is in the genders of these article pronouns that the greatest difficulty may be found. The student must entirely free his mind of the idea that gender is simply a distinction of sex. In Indian tongues, genders are usually are methods of classification primarily into animate and inanimate. The animate may be again divided into male and female, but this is rarely the case. Often by these genders all objects are classified characteristics found in their attitudes or supposed constitution. Thus we may have the animate and inanimate, one or both, divided into the *standing*, the *sitting*, and the *lying*; or they may be divided into the *watery*, the *mushy*, the *earthy*, the *stony*, the *woody*, and the *fleshy*. The gender of these article pronouns has rarely been worked out in any language. The extent to which these classifications enter into the article pronouns is not well known. The subject requires more thorough study. These incorporated particles are here called *article* pronouns. In the conjugation of the verb they take an important part, and have by some writers been called *transitions*. Beside pointing out with particularity the person, number, and gender or the subject and object, they perform the same offices that are usually performed by those inflections of the verb that occur to make them agree in gender, number, and person with the subject. In those Indian languages where the article pronouns are not found, and the personal pronouns only are used, the verb is usually

inflected to agree with the subject or object, or both, in the same particulars.

The article pronouns as they point out person, number, gender, and case of the subject and object, are not simple particles, but are to a greater or lesser extent compound; their component elements may be broken apart and placed in different parts of the verb. Again, the article pronoun in some languages may have its elements combined into a distinct word in such a manner that it will not be incorporated in the verb, but will be placed immediately before it. For this reason the term "article pronoun" has been chosen rather than "attached pronoun." The older term, transition, was given to them because of their analogy function to verbal inflections.

Thus the verb of an Indian language contains within itself incorporated article pronouns which point out with great particularity the gender, number, and person of the subject and object. In this manner verb, pronoun, and adjective are combined, and to this extent these parts of speech are undifferentiated.

In some languages the article pronoun constitutes a distinct word, but whether free or incorporated it is a complex tissue of adjectives.

Again, nouns sometimes contain particles within themselves to predicate possession, and to this extent nouns and verbs are undifferentiated.

The verb is relatively of much greater importance in an Indian tongue than in a civilized language. To a large extent the pronoun is incorporated in the verb as explained above, and thus constitutes a part of its conjugation.

Again, adjectives are used as intransitive verbs, as in most Indian languages there is no verb "to be" used as a predicator or copula. Where in English we would say "the man is good," the Indian would say "that man good," using the adjective as an intransitive verb, *i. e.*, as a predicator. If he desired to affirm it in the past tense, the intransitive verb "good" would be inflected, or otherwise modified, to indi-

cate the tense; and so, in like manner, all adjectives when used to predicate can be modified to indicate mode, tense, number, person, &c., as other intransitive verbs.

Adverbs are used as intransitive verbs. In English we may say "he is there;" the Indian would say "that person there," usually preferring the demonstrative to the personal pronoun. The adverb "there" would, therefore, be used as a predicant or intransitive verb, and might be conjugated to denote different modes, tenses, numbers, persons, &c. Verbs will often receive adverbial qualifications by the use of incorporated particles, and still further, verbs may contain within themselves adverbial limitations without our being able to trace such meanings to any definite particles or parts of the verb.

Prepositions are intransitive verbs. In English we may say "the hat is on the table;" the Indian would say "that hat on table;" or he might change the order and say "that hat table on;" but the preposition "on" would be used as an intransitive verb to predicate, and may be conjugated. Prepositions may often be found as particles incorporated in verbs, and still further, verbs may contain within themselves prepositional meanings without our being able to trace such meanings to any definite particles within the verb. But the verb connotes such ideas that something is needed to complete its meaning, that something being a limiting or qualifying word, phrase, or clause. Prepositions may be prefixed, infixed, or suffixed to nouns; *i. e.*, they may be particles incorporated in nouns.

Nouns may be used as intransitive verbs under the circumstances when in English we would use a noun as the complement of a sentence after the verb "to be."

The verb, therefore, often includes within itself subject, direct object, indirect object, qualifier, and relation-idea. Thus it is that the study of an Indian language is, to a large extent, the study of its verbs.

Thus adjectives, adverbs, prepositions, and nouns are used

as intransitive verbs; and, to such extent, adjectives, adverbs, prepositions, nouns, and verbs are undifferentiated.

From the remarks above, it will be seen that Indian verbs often include within themselves meanings which in English are expressed by adverbs and adverbial phrases and clauses. Thus the verb may express within itself direction, manner, instrument, and purpose, one or all, as the verb "to go" may be represented by a word signifying "go home"; another, "go away from home"; another, "go to a place other than home"; another, "go from a place other than home"; one, "go from this place," without reference to home; one, "to go up"; another, "to go down"; one, "go around"; and, perhaps, there will be a verb "go up hill"; another, "go up a valley"; another, "go up a river," &c. Then we may have "to go on foot," "to go on horseback," "to go in a canoe"; still another, "to go for water"; another, "for wood," &c. Distinct words may be used for all these, or a fewer number used, and these varied by incorporated particles. In like manner, the English verb "to break" may be represented by several words, each of which will indicate the manner of performing the act or the instrument with which it is done. Distinct words may be used, or a common word varied with incorporated particles.

The verb "to strike" may be represented by several words, as signifying severally "to strike with the fist," "to strike with a club," "to strike with the open hand," "to strike with a whip," "to strike with a switch," "to strike with a flat instrument," &c. A common word may be used with incorporated particles or entirely different words used.

Mode in an Indian tongue is a rather difficult subject. Modes analagous to those of civilized tongues are found, and many conditions and qualifications appear in the verb which in English and other civilized languages appear as adverbs, and adverbial phrases and clauses. No plane of separation can be drawn between such adverbial qualifications and true modes. Thus there may be a form of the verb which shows that the speaker makes a declaration as cer-

tain, *i. e.*, an *indicative* mode; another which shows that the speaker makes a declaration with doubt, *i. e.*; a *dubitative* mode; another that he makes a declaration on hearsay, *i. e.*, a *quotative* mode; another form will be used in making a command, giving an *imperative* mode; another in imploration, *i. e.*, an *implorative* mode; another form to denote permission, *i. e.*, a *permissive* mode; another in negation, *i. e.*, a *negative* mode; another form will be used to indicate that the action is simultaneous with some other action, *i. e.*, a *simultative* mode; another to denote desire or wish that something be done, *i. e.*, a *desiderative* mode; another that the action ought to be done, *i. e.*, an *obligative* mode; another that action is repetitive from time to time, *i. e.*, a *frequentative* mode; another that action is caused, *i. e.*, a *causative* mode, etc.

These forms of the verb, which we are compelled to call modes, are of great number. Usually with each of them a particular modal particle or incorporative adverb will be used; but the particular particle which gives the qualified meaning may not always be discovered; and in one language a different word will be introduced where in another the same word will be used with an incorporated particle.

It is stated above that incorporated particles may be used to indicate direction, manner, instrument, and purpose; in fact, any adverbial qualification whatever may be made by an incorporated particle instead of an adverb as a distinct word.

No line of demarkation can be drawn between these adverbial particles and those mentioned above as modal particles. Indeed, it seems best to treat all these forms of the verb arising from incorporated particles as distinct modes. In this sense, then, an Indian language has a multiplicity of modes. It should be further remarked that in many cases these modal or adverbial particles are excessively worn, so that they may appear as additions or changes of simple vowel or consonant sounds. When incorporated particles

are thus used, distinct adverbial words, phrases, or clauses may also be employed, and the idea expressed twice.

In an Indian language it is usually found difficult to elaborate a system of tenses in paradigmatic form. Many tense or time particles are found incorporated in verbs. Some of these time particles are excessively worn, and may appear rather as inflections than as incorporated particles. Usually rather distinct present, past, and future tenses are discovered; often a remote or ancient past, and less often an immediate future. But great specification of time in relation to the present and in relation to other times is usually found.

It was seen above that adverbial particles cannot be separated from modal particles. In like manner tense particles cannot be separated from adverbial and modal particles.

In an Indian language adverbs are differentiated only to a limited extent. Adverbial qualifications are found in the verb, and thus there are a multiplicity of modes and tenses, and no plane of demarkation can be drawn between mode and tense. From preceding statements it will appear that a verb in an Indian tongue may have incorporated with it a great variety of particles, which can be arranged in three general classes, *i. e.*, pronominal, adverbial, and prepositional.

The pronominal particles we have called article pronouns; they serve to point out a variety of characteristics in the subject, object, and indirect object of the verb. They thus subserve purposes which in English are subserved by differentiated adjectives as distinct parts of speech. They, might, therefore, with some propriety, have been called adjective particles, but these elements perform another function; they serve the purpose which is usually called "agreement in language;" that is, they make the verb agree with the subject and object, and this indicate the syntactic relation between subject, object, and verb. In this sense they might with propriety have been called relation particles, and doubtless this function was in mind when some of the older grammarians called them transitions.

The adverbial particles perform the functions of voice, mode, and tense, together with many other functions that are performed in languages spoken by more highly civilized people by differentiated adverbs, adverbial phrases, and clauses.

The prepositional particles perform the function of indicating a great variety of subordinate relations, like the prepositions used as distinct parts of speech in English.

By the demonstrative function of some of the pronominal particles, they are closely related to adverbial particles, and adverbial particles are closely related to prepositional particles, so that it will be sometimes difficult to say of a particular particle whether it be pronominal or adverbial, and of another particular particle whether it be adverbial or prepositional.

Thus the three classes of particles are not separated by absolute planes of demarkation.

The use of these particles as parts of the verb; the use of nouns, adjectives, adverbs, and prepositions as intransitive verbs; and the direct use of verbs as nouns, adjectives, and adverbs, make the study of an Indian tongue to a large extent the study of its verbs.

To the extent that voice, mode, and tense are accomplished by the use of agglutinated particles or inflections, to that extent adverbs and verbs are undifferentiated.

To the extent that adverbs are found as incorporated particles in verbs, the two parts of speech are undifferentiated.

To the extent that prepositions are particles incorporated in the verb, prepositions and verbs are undifferentiated.

To the extent that prepositions are affixed to nouns, prepositions and nouns are undifferentiated.

In all these particulars it is seen that the Indian tongues belong to a very low type of organization. Various scholars have called attention to this feature by describing Indian languages as being holophrastic, polysynthetic, or synthetic. The term synthetic is perhaps the best, and may be used as synonymous with undifferentiated.

Indian tongues, therefore, may be said to be highly synthetic in that their parts of speech are imperfectly differentiated.

In these same particulars the English language is highly organized, as the parts of speech are highly differentiated. Yet the difference is one of degree, not of kind.

To the extent in the English language that inflection is used for qualification, as for person, number, and gender of the noun and pronoun, and for mode and tense in the verb, to that extent the parts of speech are undifferentiated. But we have seen that inflection is used for this purpose to a very slight extent.

There is yet in the English language one important differentiation which has been but partially accomplished. Verbs as usually considered are undifferentiated parts of speech; they are nouns and adjectives, one or both, and predicants. The predicant simply is a distinct part of speech. The English language has but one, the verb *to be*, and this is not always a pure predicant, for it sometimes contains within itself an adverbial element when it is conjugated for mode and tense, and a connective element when it is conjugated for agreement. With adjectives and nouns this verb is used as a predicant. In the passive voice also it is thus used, and the participles are nouns or adjectives. In what is sometimes called the progressive form of the active voice nouns and adjectives are differentiated in the participles, and the verb "to be" is used as a predicant. But in what is usually denominated the active voice of the verb, the English language has undifferentiated parts of speech. An examination of the history of the verb "to be" in the English language exhibits the fact that it is coming more and more to be used as the predicant, and what is usually called the common form of the active voice is coming more and more to be limited in its use to special significations.

The real active voice, indicative mode, present tense, first person, singular number, of the verb "to eat," is "am eating." The expression "I eat," signifies "I am accustomed

to eat." So, if we consider the common form of the active voice throughout its entire conjugation, we discover that many of its forms are limited to special uses.

Throughout the conjugation of the verb the auxiliaries are predicants, but these auxiliaries, to the extent that they are modified for mode, tense, number, and person, contain adverbial and connective elements.

In like manner many of the lexical elements of the English language contain more than one part of speech: "To ascend" is to go up; "to descend" is to go down; and "to depart" is to go from.

Thus it is seen that the English language is also synthetic in that its parts of speech are not completely differentiated. The English, then, differs in this respect from an Indian language only in degree.

In most Indian tongues no pure predicant has been differentiated, but in some the verb *to be*, or predicant, has been slightly developed, chiefly to affirm existence in a place.

It will thus be seen that by the criterion of organization Indian tongues are of very low grade.

It need but to be affirmed that by the criterion of sematologic content Indian language are of a very low grade. Therefore, the frequently-expressed opinion that the languages of barbaric peoples have a more highly organized gramatic structure than the languages of civilized peoples has its complete refutation.

It is worthy of remark that all paradigmatic inflection in a civilized tongue is a relic of its barbaric condition. When the parts of speech are fully differentiated and the process of placement fully specialized, so that the order of words in sentences has its full significance, no useful purpose is subserved by inflection.

Economy in speech is the force by which its development has been accomplished, and it divides itself properly into economy of utterance and economy of thought. Economy of utterance has had to do with the phonic constitution of words; economy of thought has developed the sentence.

All paradigmatic inflection requires unnecessary thought. In the clause "if he was here," "if" fully expresses the subjunctive condition, and it is quite unnecessary to express it a second time by using another form of the verb "to be." and so the people who are using the English language are deciding, for the subjunctive form is rapidly becoming obsolete with the long list of paradigmatic forms which have disappeared.

Every time the pronoun *he*, *she*, or *it* is used it is necessary to think of the sex of its antecedent, though in its use there is no reason why sex should be expressed say one time in ten thousand. If one pronoun non-expressive of gender were used instead of the three, with three gender adjectives, then in nine thousand nine hundred and ninety-nine cases the speaker would be relieved of the necessity of an unnecessary thought and in the one case an adjective would fully express it. But when these inflections are greatly multiplied, as they are in the Indian languages, alike with the Greek and Latin, the speaker is compelled in the choice of a word to express his idea to think of a multiplicity of things which have no connection with that which he wishes to express.

A Ponca Indian, in saying that a man killed a rabbit, would have to say the man, he, one, animate, standing, in the nominative case, purposely killed, by shooting an arrow, the rabbit, he, the one, animate, sitting, in the objective case; for the form of a verb to kill would have to be selected, and the verb changes its form by inflection and incorporated particles to denote person, number, and gender as animate or inanimate, and gender a standing, sitting, or lying, and case; and the form of the verb would also express whether the killing was done accidentally or purposely, and whether it was by shooting or by some other process, and, if by shooting, whether by bow and arrow, or with a gun; and the form of the verb would in like manner have to express all of these things relating to the object; that is, the person, number, gender, and case of the object; and from the multiplicity of paradigmatic forms of

the verb to kill this particular one would have to be selected. Perhaps one time in a million it would be the purpose to express all of these particulars, and in that case the Indian would have the whole expression in one compact word, but in the ninehundred and ninety-ninethousand nine hundred and ninety-nine cases all of these particulars would have to be thought of in the selection of the form of the verb, when no valuable purpose would be accomplished thereby.

In the development of the English, as well as the French and German, linguistic evolution has not been in vain.

Judged by these criteria, the English stands alone in the highest rank ; but as a written language, in the way in which its alphabet is used, the English has but emerged from a barbaric condition.

ABSTRACTS OF PAPERS
READ BEFORE THE
• ANTHROPOLOGICAL SOCIETY
OF
WASHINGTON, D. C.,
FOR THE
Year Ending January, 18 1881.

SEVENTEENTH REGULAR MEETING.

✓ FEBRUARY 3, 1880.

**The Mound-Builders: An Inquiry Into Their Assumed
Southern Origin.**

BY WILLS DE HASS.

Claims in behalf of the southern origin of the Mound-Builders have been frequently advanced. Among the recent advocates of the theory Mr. Morgan and Professor W. Denton were especially mentioned. The latter gentleman was represented to have maintained that the Mound-Builders were Mexicans who came north to work the Lake Superior copper mines, on the following grounds: 1, Lake Superior copper has been found both in the mounds and in the teocallis. 2, The mounds and teocallis are frequently similar in shape, and obsidian knives occur in both. 3, After Cortez conquered Mexico the Mound-Builders began to disappear.

To these assertions Mr. de Hass replies: 1. The identity of Mound-Builders with any tribe of Mexicans cannot be sustained. 2, The resemblance of the mounds to the teocalis is not sufficient to establish the identity of those who erected them. 3, Sacrificial mounds in the Ohio valley are purely mythical. 4, Worked obsidian has not been found in western turmuli. 5, No records exist concerning the Mound-Builders since the conquest of Mexico. 6, No mounds are found within several hundred miles of the Lake Superior copper region. 7, Copper implements are very rare, even in the mounds.

Mr. Morgan's theory is stated in the form of questions: 1, Did the Mound-Builders come from the South? 2, Were they village Indians? 3, Were their mural works designed to support dwellings? All of these are answered by Mr. Morgan in the affirmative.

Mr. de Hass, reviewing these questions in their order, replied:

1. The vast and complicated systems of earthworks stretching from the lakes to the Gulf become more complicated and formidable as we proceed southward. It is not improbable that the Mound-Builders divided at some point in the Mississippi Valley—one portion going southeast into Florida, and thence across to the West Indies; the other, sweeping over Indian Territory, Texas, New Mexico, Arizona, Chihuahua, and other portions of northern Mexico, finally reached the valley of Anahuac. The difference in the art relics of the two regions were adduced to show that there had not been a northern migration. Indeed, not a single tropical animal or plant appears upon the fictile ware or the sculptures of the Mound-Builders.

The position assumed by Mr. Morgan that the Mound-Builders were our modern Indians was opposed by Mr. De Hass on the ground of their difference in customs of living and sepulture, in monumental and artistic development and in their crania. Again, the sites chosen by the Mound-Builders were the very points selected for some of our most

thriving cities, such as Cincinnati, St. Louis, Chillicothe, Columbus, Portsmouth, Vincennes, Marietta, Moundville, etc., while, by Mr. Morgan's own admission, "this very region was unoccupied at the time of European discovery, because unadapted to tribes in the lower status of barbarism."

If the banks of the Ohio works were the sites of communal dwellings, by all analogy, we should find some evidence of the fact in the *débris*. There are no abandoned hearths, charcoal, carbonized bones, broken pottery, in or on these works, while the recent explorations of the pueblos and cliff dwellings reveal immense quantities of these relics there.

Again, we have positive evidence in the mounds, and in cists beneath the works, that many of these tumuli, and even some of the earth-walls were erected for burial purposes.

Mr. De Hass, in conclusion, drew attention to the following facts:

I. Not a single specimen of wrought-stone for building purposes has been discovered within the Mound Builders' area.

II. The pottery of the mounds is of the rudest character, while that of the Pueblos and of Mexico is elaborately formed and decorated. It is not probable that a people who have once learned the art of pottery would soon forget it.

III. The Mexicans understood the art of hardening copper and of making bronze.

IV. The Mound-Builders dwelt in communities near their mounds and works, as is attested by their camp-sites and cemeteries.

V. Mounds were primarily designed for burial.

VI. All mural mounds can be proved to have been for defence, amusement, or religion.

EIGHTEENTH REGULAR MEETING.

FEBRUARY 17, 1880.

Burial Customs of the North American Indians.

BY H. C. YARROW.

This paper has been published in full, in the Introduction to the study of the Mortuary Customs of the North American Indians, by the same author, issued by the Bureau of Ethnology.

8 **The Development of Deliberative Government among the North American Indians.**

BY J. HOWARD GORE.

War compelled the savages to remain in a family union. This family was ruled by the parent from whom it had its origin. A greater danger or a desire to govern other bands caused families to coalesce. In order to secure harmony of action and successful results, there must be no division of governmental power, for acquiescence to authority among warlike people is on account of fear or respect for an individual. The man who ran the fastest, killed the greatest number of enemies, and took the most booty would be the actual and eventually the accepted leader of the tribe. When the necessity which caused this alliance of families was removed, there would be a tendency to separate, so that the leader in war in order to be a ruler in peace must rely upon superstitious ceremony, from which all later ceremony developed. The sons of this chief, inheriting their fathers' strength and skill, would be the wealthiest successors to the chieftancy—the eldest only serving. As the tribe increased in number, the chief called in men of wisdom or skill for advisors. The utility of this step becoming apparent, the power of the chief decreased, while that of the councillors

became greater. Finally, men became members of the council by obtaining a standard accomplishment or requisite age.

The chief, or the councilman from the family which originally furnished the chief, commenced all discussion. The others spoke in order of the importance of the families to which they belonged. Women were sometimes admitted, whose business it was to remember the proceedings and narrate them to their children. All measures were decided by a unanimous majority. If there was a difference of opinion the minority usually yielded, if not, no decision would be reached. A tribe, when very large, or the union of several small tribes of the same stock-language, was called a nation, whose government was the same as the tribe. The highest type of government was the confederacy of nations, as the Iroquois, Ottawa, Creek, and Powhatan.

The regulations of the Iroquois League when America was first settled was as follows: A council of sachems, limited in number, equal in power, a union of six nations, each remaining independent in all matters pertaining to local government. Unanimity in council, sachems voted by tribes, council open to orators of the people for the discussion of public questions—council alone deciding. Women had a veto power in declaration of war.

In 1836 the Choctaw Nation had a council of forty members elected by popular vote; chiefs had an honorary seat; were not allowed to vote, though they possessed a veto power, over which a two-thirds vote passed; chairman and officers were elected, committees appointed, speakers arose and addressed the chair, questions were put in the usual form, vote given by rising, minutes kept in English and read in Choctaw.

The confederacy is superior, and related to the nation as the nation is to the tribe and the tribe to the family, and the whole resembles our advance from the neighborhood to the county, thence to State, and finally to the union of States.

NINETEENTH REGULAR MEETING.

MARCH 2, 1880.

[Annual Address of the President.]

TWENTIETH REGULAR MEETING.

MARCH 16, 1880.

The Four Creations of Mankind—A Tualati Myth.

By A. S. GATSCHET.

native myth

In olden times people swarmed in the region of the Columbia and Willamette rivers. No sickness prevailed and everybody grew up to old age. Five men then started out on a hunting expedition, taking with them a dog. They camped out five nights, and on the evening of the fifth day, when the dog came home, a little girl asked: "How much game has been killed by your party?" The dog made no reply. The little girl asked the same question five times, when the dog replied: "Five were killed." After this the world turned upon itself, all human beings became stars, and there was nobody left on earth save the girl, whom the dog took to himself for a wife. She first bore to him a dog and a babe, and becoming pregnant a second time was again delivered of a babe and a dog. From these children there came other children, and the country again swarmed with people. Then one man said to another: "A new people will soon come in large numbers; we had better retire from here, or be changed into some other form, for in a short space of time there will be none of us left on earth." The man who said this was a chief, and he traveled all over the land and told everybody the same thing. When he returned to his home all the people had been transformed into the pebbles which still glitter from the bottoms of the rivers.

Of old there was no water on the earth ; men sucked the moisture from wooden sticks, and snapped their tongue for water. Then a third people settled on the earth and became numerous. Two women stole an infant girl and kept her secretly for years. She grew up to be a maiden and went out to dig kamas. A flint-boy found her on the kamas-fields and brought her back to her mother. The two women who had stolen her became angry thereat and danced to make it rain. It rained for twenty days, and a flood covered all the mountain-tops. Everybody perished except the girl, and the flint-boy who had grown up to be a flint-man. He hid her in his armpit, and upon this the waters subsided. Perceiving the two women who had caused the rain to come down in such torrents, he put them to death, and on burning them he collected their ashes and blew them up to the sky, and said : " You shall no longer travel on earth ; you shall be clouds, and only when the clouds become heavy, *then* it will rain. That is all will remain of you." This is why no one can make rain now.

Then all human beings were changed into animals that live in the water ; some into salmon, some into eels, some into beavers, and other aquatic animals. Thus it came that "this our ancient people" now live in the depths of the sea. They are there as large and small salmon, lobsters, sea otters, land otters, minks, seals, and other monsters of the deep. This is the third generation of mankind.

But from the flint-boy and the girl another people grew up, and their descendants filled the world for the fourth time. In those days there lived in a lodge a poor family consisting of a woman and her husband, a son and a little daughter. One day a crow came into the lodge said to the man : " Make a bow and arrows ! " When he had finished these the crow said : " Now go out out and hunt in the woods ; kill the white-tailed deer, the elk, the black bear, the cougar, the wild cat, and the grizzly bear ; kill all kinds of animals, eat their flesh, make blankets and dresses for yourselves from their skins which are good to wear, and grow

rich." Thus spoke the crow to the man ; to the woman it said : Take a stick, sharpen the end, and dig kamas root, the wild carrot, and other eatable roots in the ground ; get the wild potato out of the swamp ; then you will be poor no longer ; and give up the daughter to me ; I shall take care of her."

Then the mother inquired of the crow : "How can you take care of my child ?" The crow answered, "I shall lay her down on my wing." "But she might fall down," said the mother. "She cannot possibly fall," said the crow, "but let us see, let us try." The crow put the child on its wings ; high up it went into the sky ; down again it flew, wavered and beat its wings, but the child did not fall. Then the mother consented and delivered the child to the crow, which flew off.

The couple did as the crow had told them ; their food became abundant ; they got rich and remained in their lodges one year. In the meanwhile the crow had picked up a small pebble and threw it into the fire, near which the little girl was playing. Suddenly the pebble burst to pieces and struck the girl on her belly. Thus she became pregnant, and two months after was delivered of a son. She was but one year old when she bore that child. In five days the child talked, in ten days it walked around, in fifteen days it started out hunting birds, in twenty days it killed a pheasant, in twenty-five a young deer, in thirty a large deer, in thirty-five a young elk, in forty a large elk. Then the boy said to his grandmother, "I want to drink water." She replied, "There is no water." He said, "Wherefore is there no water ?" She answered, "There never has been any water since people were created." The boy said, "It is bad that that there is no water, for pretty soon a new people will come, and water will be welcome to them. How did you do when you wanted to drink ?" The grandmother said, "From the trees we peeled off the bark and sucked or lapped up the sap or moisture." The boy said, "It is not good to do so ; I am going to look out for water. Do you

see the sun standing in the sky?" "Yes," replied she. "Do you see the moon? That is the place where I am going to get the water, and if there is none, I will go to the sun; perhaps they have some water there." "That's right," said the grandmother.

The boy set out and arrived at the house of the moon. The moon asked, "Where do you come from?" The boy said, "I am traveling in search of water." The moon said, "I have no water here but the sun has water. The sun is angry now, but you go there and I will give you good smelling grass to take along with you. The sun has a child, and that child will smell the grass, and then the sun will give you water." The boy said, "Hand me over the grass." And the moon gave him the grass and then the boy started out for the sun's house. There he saw the daughter of the sun. "Oh," she said, "you smell so good!" "Yea," said the boy, "I smell good! Hurry up and give me some water." And grasping a wooden vessel, he went to get water, telling her to come with him. They went to the nearest house and there he beheld water. On the shore of the lake was a canoe with two paddles lying in it. Overwhelmed with joy, the boy exclaimed, "Oh, what a nice canoe!" The sun's daughter said, "Step into it and let us play on the water; turn your face the other way." And the boy stepped into the canoe and dipped the oars in the water. "Now let us go; let us go all around, everywhere," he said to the water.

Thereupon the waters were loosened all around, everywhere the waters started and sprung up. Thus the boy first made the sea, then the larger rivers, then all the creeks, streams, and streamlets, and when he had done he exclaimed: "Now, I have made and finished all the waters, and the waters are good! When the new people arrive they will have water enough and will never be in want of it."

This was the life and end of the fourth people on earth.

TWENTY-FIRST REGULAR MEETING.

„ APRIL 6, 1880.

**The Indian Title.—The Method and Chronology of its
Extinguishment by the United States.**

BY C. C. ROYCE.

The discovery of the American Continent with its supposed marvelous wealth of precious metals and commercial woods, gave fresh impetus to the ambition and cupidity of European monarchs.

Spain, France, Holland, and England, each sought to rival and out do the other in the magnitude and value of her discoveries.

As the primary object of each of these European potentates was the same and as it was likely to lead to much conflict of jurisdiction, the necessity of some general rule became apparent, whereby their respective claims might be acknowledged and adjudicated without resort to the arbitrament of arms. Out of this necessity grew the rule, which became a part of the recognized law of Nations, and which gave the preference of title to the monarch whose vessels should be the first to discover, rather than to the one who should first enter upon the possession of new lands.

The result of this rule was to give the monarch of the discovering nation the sole right of acquiring the soil from the natives. This right was asserted and fully recognized by all the commercial nations of Europe in their dealings with each other. It carried with it a modification of the Indian title to a simple right of possession, with the ultimate fee resting in the discovering sovereign.

No one of these nations was more zealous in her maintenance of these doctrines than England. Her claims to this continent were based upon the discoveries of Cabot; those of France from Verrazani, and Spain plead the discoveries of Ponce de Leon as her title-deed.

As the successor of England to her original North American possessions, the policy of the United States since the adoption of the Federal Constitution has followed the precedent established by the mother country.

In the treaty of peace in 1783, between Great Britain and the United States, the former relinquished all claim to all the country south and West of the great northern rivers and lakes as far as the Mississippi. During the period between the conclusion of this treaty and the year 1789, it was held by Congress that the relinquishment of territory thus made by Great Britain, with no saving clause guaranteeing the Indian right of occupancy, carried with it an unqualified fee-simple title, unembarrassed by any intermediate estate or tenancy.

The Indians were even required to acknowledge the absolute title of the United States in the treaties of 1784 and 1786, with the Six Nations and Shawnees respectively.

The breadth and boldness of the territorial claims thus asserted by the United States were not long in producing their natural effect. Joseph Brant succeeded in reviving his favorite project of an alliance between the Six Nations and northwestern tribes. A grand council was assembled at Huron Village, opposite Detroit, in 1786, which resulted in the formulation of an address to Congress by the Indians, expressing a desire for peace, but firmly insisting that all treaties with the United States must be with the general voice of the whole confederacy, and that the Ohio River must be the boundary between Indian territory and the United States. This address purported to represent the Five Nations, Hurons, Ottawas, Twichtwees, Shawnees, Chippewas, Cherokees, Delawares, Pottawatomies, and the Wabash Confederates.

Considering the weakness of the Government under the old articles of confederation, and the exhausted condition immediately following the Revolution, such a remonstrance caused a profound sensation, and Congress hastened to make

an appropriation for the extinguishment of Indian claims to lands already ostensibly ceded to the United States.

Two treaties negotiated at Fort Harmar, opposite Marietta, Ohio, in 1789, were the result. One with the Six Nations, and the other with tribes north and west of the Ohio River, wherein the Indian title of occupancy was acknowledged, subject to extinguishment only by purchase, or as the result of a justifiable war.

Though more than once questioned, this principle has invariably been sustained by the courts of final resort. The decisions of the Supreme Court of the United States bear consistent testimony to its legal soundness in three leading cases—in 1823, 1831, and 1832. In the second of these decisions, Chief-Justice Marshall, in delivering the opinion, maintained that the Cherokees were a State; that the treaties with them recognized them as a people capable of maintaining the relations of peace and war; that the condition of the Indians, in their relations to the United States, was unlike that of any other people; that, in general, nations not owing a common allegiance are foreign to each other; but that the relation of the Indians to the United States was marked by peculiar and cardinal distinctions which existed nowhere else; that the Indians had an unquestionable right to the lands they occupied, until it should be extinguished by voluntary cession to the United States; that they could not be denominated foreign nations, but might more accurately be called domestic dependent nations.

The Government of the United States being thus thoroughly committed to the principle of Indian right of occupancy of their unceded lands, it becomes a subject of interest to the student of history as well as an addition of practical value to the official records of the Government, to have a carefully compiled work, showing the boundaries of the several tracts of country which have been thus acquired from time to time (within the present limits of the United States) by cession or relinquishment from the various Indian tribes.

Such a work would form the basis of any complete history of our aboriginal tribes in their relations to and effects upon the growth and diffusion of our population. It has for some time past been in course of preparation, and it is hoped will within a reasonable period reach completion. To give more intelligent idea of the scope of the work, a rough preliminary map was presented, upon which was outlined in colors and numerically designated each cession of the territory, made by the Indians under treaty stipulations, since the establishment of the Federal Government, so far as the scale of the map would permit. Many of the cessions of but a few miles square could only be shown upon a map of much larger scale.

This work, in course of preparation by Mr. Royce, will include an atlas of the United States exhibiting the several cessions of land by the Indians to the United States, and the text will include a chronologic list of treaties with the various Indian tribes exhibiting the date, place where, and person by whom negotiated, a history of the causes leading to the several treaties as exhibited by contemporary correspondence and other trustworthy data. An alphabetic list of all rivers, lakes, mountains, villages and other points in such treaties, together with the situation thereof, and the present names of such of these objects or places, the nomenclature of which has been changed since the date of the treaties in which they are mentioned will be given. Also an alphabetical list of rivers, lakes, and mountains in the United States, showing not only their present names, but those by which they have been known since the discovery of America, giving the date and authority therefor. The several features of this plan were elaborately illustrated by Mr. Royce.

TWENTY-SECOND REGULAR MEETING.

APRIL 20, 1880.

Pre-Social Man.BY L. F. WARD.

The speaker said it might safely be given as the opinion of those naturalists who accept the animal origin of the human race that at some time and in some part of the world some one group, possibly a very limited one, of the ape family acquired certain of the characters which now distinguish the human from the simian anatomy. These characters he summed up as follows: Increased capacity of the cranium and increased size of the encephalon; greater complication in the mechanism of the larynx; the erect posture of the body; the plantigrade character of the feet; non-oppossibility of the great toe; diminished length of the arms in proportion to the trunk; greater or less absence of hair from most of the body and limbs, and double curvature of the spine. Among these points of difference there was a certain inter-dependence, so that on the principle of adaptation they would all flow from some one or two of the chief ones, and he thought that the first of these characters to be acquired by the simian ancestors of our race must have been the increased size of brain, which might have resulted from the necessity certain apes were under, of depending on superior cunning for protection against animals of greater strength and ferocity than themselves; and this character once acquired, together with the modifications resulting from the substitution of terrestrial for arboreal habits, the rest would follow.

It was pointed out, too, that the immediate progenitor of man among the anthropoids might have been considerably nearer to the human form than any of the known anthropoids now are, as would be the case if there were a creature combining the full chest of the gibbon, the skull of the

chimpanzee, the short arms and man-like hands and feet of the gorilla, the size of brain of the orang-outang, and the features of *Semnopithicus*, *Cercopithicus*, or *Mornon*. That such a form once existed was as reasonable as that that the orang-outang should exist. Increase of brain and accompanying increase of intelligence was due to two causes: 1, Efforts to evade enemies through the exercise of sagacity or cunning; 2, Efforts to obtain food by skill and strategy. The first of these was rendered necessary to a greater degree than in the case of other animals in consequence of a notable absence of the means of defence with which most animals are endowed. The second was also due in great part to the lack of offensive weapons and other specialized means of pursuing any one peculiar mode of life. To understand this better, however, another important fact must be considered. Nearly or quite all the animals of the family from which man has descended are strictly arboreal. They are usually light and supple creatures, adapted to life in trees, subsisting chiefly upon the nuts and fruits which they yield. But some of the anthropoids, the gorilla, for example, have attained so large a size and so great a weight that arboreal existence has become difficult and they have descended to the ground. The ancestor of man must have belonged to this class and early become at least a partially terrestrial animal. The effect of this was both to increase the number and character of his enemies and to diminish his supply of natural food. Both these circumstances combined in increasing the necessity for mental exertion which in turn was the immediate cause of his rapid brain development.

Two causes likewise, operated to produce the erect posture, namely: 1st, life on the ground, and 2nd, increased brain mass.

The conformation of the limbs of the ape family is such that life on the ground would naturally cause the fore limbs to be used more and more exclusively as hands, and the hind ones as the only means of locomotion. The enlarged brain accompanied by a still greater increase in the weight of the

skull and other bones of the head would render the horizontal support of the head extremely difficult. The strict laws of mechanical equilibrium, therefore, operating cumulatively through the joint action of both these causes would tend to elevate the forepart of the body until the spine should become vertical, the head be borne directly over this bony axis, the fore limbs completely exempted from duty as organs of locomotion, and the hind limbs devoted exclusively to that purpose.

Respecting the important attribute of speech it was maintained that it is the result of mental far more than physical development. The larynx of many animals, and particularly of the ape family, is known to be highly developed. The true reason why these animals do not possess articulate speech is because they do not possess sufficient intelligence to invent and employ arbitrary sound-symbols. That they cannot be expected to perform so high an intellectual feat was exemplified by the fact that microcephalous idiots having a brain capacity of less than sixty cubic inches are incapable of being taught to speak, although they possess a well developed larynx and behave in all respects like tamed animals, while the orang, whose brain is larger than that of any other ape, has an encephalon of only thirty-five cubic inches.

Thus, without any violent assumptions, it was shown that all the differences which separate the highest animals from the lowest human races can be accounted for by the natural laws of adaptation as now understood by naturalists.

The three questions of the unity, the local origin, and the antiquity, of the human race were then briefly considered. The first may now be regarded as temporarily, if not permanently, settled on the monophyletic basis. The second cannot be expected to be settled, or even placed, in a way of enlightened discussion, until the tropical regions of Asia and Africa shall have been thoroughly explored by paleontologists. As to the third enough is already known to enable us to class man along with many other of the higher mam-

But the fact was strongly insisted upon that the ordinary method of discussing all these questions was vicious, in failing to recognize the underlying question as to what constitutes a being—a man. As no true line of demarkation between apehood and manhood exists there is no fixed point, either genealogical, chrological, or chronological, from which to set out.

TWENTY-THIRD REGULAR MEETING.

MAY 4, 1880.

Who were the Massawomekes?

By A. L. GUSS.

The paper collected and analyzed all statements of Capt. John Smith concerning this tribe, first met by him in 1608 at the head of Chesapeake Bay. From these it appeared that all the Indians on the Chesapeake and its affluents were in dread of a people named Massawomekes, who were superior to them in numbers and warlike power. The large body of historians have been of opinion that these people were Iroquois proper, commonly called the Five Nations, from the present State of New York. This was denied, and it was contended, with much elaboration of argument, deduced from ancient maps and original authorities, that they were a body of the Iroquoisan linguistic stock, neither belonging to the Five Nations nor to the Tuscaroras of the South, which latter became, in 1715, the sixth nation of the Confederacy. This theory would proceed to the conclusion that the Tuscaroras were not isolated from the remainder of the linguistic family, but that the latter extended continuously from Canada to North Carolina, occupying all Pennsylvania west of the streams flowing into the Delaware, the upper and western portions of Maryland, and all of Virginia except

the coast belt. An interesting part of the argument was that the Iroquois proper had not, prior to their being armed with guns in 1640, subdued other tribes, and that only after receiving those arms from the Dutch and English they desolated the country southward as far as the Tuscaroras, when their attention was diverted to the Illinois and to wars with the French in Canada. This southern invasion of the Five Nations depopulated the belt of country before mentioned, that was before, and at the time of Smith, occupied by the Massawomekes, which the paper further identified with the Eries.

TWENTY-FOURTH REGULAR MEETING.

MAY 18, 1880.

Dumbarton Aboriginal Soapstone Quarry.

By E. R. REYNOLDS.

No Paper furnished.

The Testimony of the Romance Languages concerning the Forms of the Imperfect and Pluperfect Subjunctive in the Roman Folk-Speech.

By E. A. FAY.

Assuming, as the present state of philological science justifies us in doing, that the so-called Romance languages are simply the natural development of the old Roman folk-speech—which was unwritten, and concerning which we know scarcely anything—the purpose of this paper is to inquire what these languages have to tell us concerning one of its features, viz., its forms of the Imperfect and Pluperfect Subjunctive, as compared with the forms of those tenses in the classical or literary language.

As the Romance languages afford no trace whatever of the

classical form of the Latin Imperfect Subjunctive, it is reasonable to suppose that it did not exist in the folk-speech. The explanation of its absence from the modern language on the ground of its resemblance to the Pluperfect and Future Perfect Indicative and Perfect Subjunctive is shown to be unsatisfactory by the persistence of other forms of the verb, more closely resembling one another, and by the fact that in many verbs the similarity in these tenses did not exist.

The classical form of the Pluperfect Subjunctive is employed in all the Romance languages except Wallachian with the meaning of the Imperfect Subjunctive, and the exception in the case of Wallachian can be accounted for by the peculiar corrupting influences which the Roman speech encountered in the Northeast, and the absence of any texts of an earlier date than the end of the fifteenth century. We can therefore conclude with certainty that the literary form of the Pluperfect Subjunctive was used in the popular speech in the sense of the Imperfect Subjunctive. This usage is also found in the earliest Low Latin texts, side by side with the classical form of the Imperfect tense.

In all the Romance languages except Wallachian the Pluperfect Subjunctive is expressed by the Perfect Participle Passive combined with the Pluperfect Subjunctive of *habere* or *esse*. This form, therefore, must have existed, at least in the germ, in the ancient folk-speech. Corroborative evidence that such was the case is furnished by the examples of a similar combination with tenses of *habere* in the classical Latin. The compound form of the Pluperfect Subjunctive expresses the idea of antecedence in a very emphatic and exaggerated manner, and was probably used when it was desired to lay special stress upon this idea.

When it was not desired to give emphasis to the Pluperfect idea the simple tense was probably employed as in the literary language. Numerous examples of this kind are found in the earlier monuments of the Romance languages.

The testimony of the Romance languages concerning the

forms of the Imperfect and Pluperfect Subjunctive in the Roman folk-speech may be summed up as follows:

1. The classical form of the Imperfect Subjunctive probably did not exist among the common people.

2. The classical form of the Pluperfect Subjunctive was used to express the Imperfect and probably also the Pluperfect idea.

3. A compound of the Pluperfect subjunctive in *habere* and *esse* with the Past Participle Passive was sometimes employed for the Pluperfect tense, probably when the speaker wished to lay special emphasis upon the fact of antecedence.

TWENTY-FIFTH REGULAR MEETING.

JUNE 1, 1880.

Is Thought Possible Without Language?—Case of a Deaf Mute.

BY SAMUEL PORTER.

The paper opens with a statement of the theory of Mr. Darwin, Professor Huxley, and Max Müller, in which the rational faculty of man is regarded as the result of the possession of language.

As a contribution to the solution of the question, Professor Porter gave a detailed narrative of Mr. Melville Ballard, now a teacher in the Columbia Institute for Deaf Mutes, at Washington, who has been totally deaf since he was eighteen months old. The speaker stated that those who lose their hearing at such an early age have no advantage over those deaf from their birth.

Mr. Ballard's account of his experience proceeds as follows:

His father and mother, at an early age, endeavored to give him some idea of the Supreme Being and of a future life. He pondered the matter over and over in fruitless effort to

penetrate the origin of things. He imagined that men and animals sprung from decayed trees. Seeing the map of the world in hemispheres, he imagined it to be two great disks near each other. The sun and moon were brilliant plates endowed with mysterious power. Once being alarmed by thunder, he imagined a great man in the sky.

At eleven years of age he was delighted with the revelation to his mind of a great Creator of the world. Since then his old perplexities have frequently returned when he has taken up the inquiry as to the beginning of existence on the part of the Creator himself.

Professor Porter, resuming his discussion, remarked that Mr. Ballard's inquiries as to the origin of things were unaided by signs of any sort. It was argued that they belong to the higher order of conceptual thought. As embracing in thought much more than can be individually represented, they involve what may be called the *compendiary mode of thought*. By the capacity of man to arrive at general truths, he is separated by a wide chasm from the brute.

Professor Porter sought to explain conceptual knowledge in such a manner as to free it from some of its traditional difficulties. A concept was defined as the notion of a group of things recognized as related by certain common features, the things being apprehended as indefinite in number and in respect to individual variations. In handling a general conception, we must have something on which to hang the indeterminate part. A word may serve this end. But with the word goes a mental image which is also capable of serving without a word.

The notion of a word is itself a general notion. This admitted, the absurdity of the doctrine that general notions cannot exist without words is evident. For the *figuration* of the conception, words present certain preëminently practical advantages, but this does not invalidate the argument.

Professor Porter objected to Professor Huxley's reference to Galton's composite portraits as illustrating the generation

of ideas, because it leaves out the distinctive element of a general conception.

The characteristics of the mind exhibited by animals was then discussed, and the conclusion reached that from such the human intellect could not be developed.

Dr. Porter, in conclusion, adverted to Huxley's *Life of Hume*, and objected to such terms as "potential beliefs of memory" and "potential beliefs of expectation" as being a method of hiding the author's confusion of thought.

TWENTY-SIXTH REGULAR MEETING.

JUNE 15, 1880.

Wyandotte Government—A Short Study of Tribal Society.

BY J. W. POWELL.

In the social organization of the Wyandottes four groups are recognized, the family, the gens, the phratry, and the tribe.

THE FAMILY.

The family, as the term is here used, is nearly synonymous with the household. It is composed of the persons who occupy one lodge, or in their permanent wigwams, one section of a communal dwelling. These permanent dwellings are constructed in an oblong form of poles interwoven with bark. The fire is placed in line along the centre, and is usually built for two families, one occupying the place on each side of the fire.

The head of the family is a woman.

THE GENS.

The gens is an organized body of consanguineal kindred in the female line. "The woman carries the gens," is the

formulated statement by which a Wyandotte expresses the idea that descent is in the female line. Each gens has the name of some animal, the ancestor of such animal being its tutelary god. Up to the time that the tribe left Ohio, eleven gentes were recognized, as follows:

Deer, Bear, Highland Turtle (striped), Highland Turtle (black), Mud Turtle, Smooth Large Turtle, Hawk, Beaver, Wolf, Sea Snake, and Porcupine.

In speaking of an individual he is said to be a wolf, a bear, or deer, as the case may be, meaning thereby that he belongs to that gens; but in speaking of the body of people comprising a gens they are said to be relatives of the Wolf, the Bear, or the Deer, as the case may be.

There is a body of names belonging to each gens, so that each person's name indicates the gens to which he belongs. These names are derived from the characteristics, habits, attitudes, or mythologic stories connected with the tutelary god.

The following schedule presents the name of a man and woman in each gens as illustrating this statement:

	Wun-dát.	English.
Man of Deer Gens	De-wa-ti-re	Lean Deer.
Woman " "	A-ya-jin-ta	Spotted Fawn.
Man of Bear " "	A-tu-e-tes	Long Claws.
Woman of Bear " "	Tsá-ma"-da-ka-é	Grunting for her Young.
Man of Striped Turtle gens	Ta-há-so"-ta-ra-ta-se	Going Around the Lake.
Woman of Striped Turtle gens	Tso-we-yuñ-kyn	Gone from the Water.
Man of Mud Turtle gens	Sha-yan-tsu-wat'	Hard Skull.
Woman of Mud Turtle gens	Ya"-däsh-shu-räs	Finding Sand Beach, &c.
Man of Smooth Large Turtle gens	Hu"-du-cu-tá	Throwing Sand.

	Wun-dát:	English.
Woman of Smooth Large Turtle gens	Tsu-ca-e"	Slow Walker.
Man of Wolf gens	Ha-ró-u"-yû	One who goes about in the Dark; a Prowler.
Woman " "	Ya"-di-no	Always Hungry.
Man of Snake gens	Hu-ta-hú-sa	Sitting in curled Position.
Woman " "	Di-je-rons	One who Ripples the Water, &c.
Man of Porcupine gens	Ha"-dú-tu"	The one who puts up Quills.
Woman of Porcu- pine gens	Ké-ya-runs-kwa	Good-Sighted.

THE PHRATRY.

There are four phratries in the tribe, the three gentes, Bear, Deer, and Striped Turtle constituting the first; the Highland Turtle, Black Turtle, and Smooth Large Turtle the second; the Hawk, Beaver, and Wolf the third; and the Sea Snake and Porcupine the fourth.

This unit in their organization has a mythologic basis, and is chiefly used for religious purposes, in the preparation of medicines, and in festivals and games.

The eleven gentes as four phratries constitute the tribe.

Each gens is a body of consanguineal kindred in the female line, and each gens is allied to other gentes by consanguineal kinship through the male line, and by affinity through marriage.

To be a member of the tribe it is necessary to be a member of a gens; to be a member of a gens it is necessary to belong to some family; and to belong to a family a person must have been born in the family so that his kinship is recognized; or he must be adopted into a family and become a son, brother, or some definite relative; and this artificial relationship gives him the same standing as actual relation-

ship in the family, in the gens, in the phratry and in the tribe.

Thus a tribe is a body of kindred.

Of the four groups thus described, the gens, the phratry and the tribe constitute the series of organic units; the family, or household as here described, is not a unit of the gens or phratry, as two gentes are represented in each—the father must belong to one gens, and the mother and her children to another.

GOVERNMENT.

Society is maintained by the establishment of government, for rights must be recognized and duties performed.

In this tribe there is found a complete differentiation of the military from the civil government.

CIVIL GOVERNMENT.

The civil government inheres in a system of councils and chiefs.

In each gens there is a council, composed of four women, called Yu-wai-yu-wa-na. These four women councillors select a chief of the gens from its male members—that is, from their brothers and sons. This gentile chief is the head of the gentile council.

The council of the tribe is composed of the aggregated gentile councils. The tribal council, therefore, is composed one-fifth of men and four-fifths of women.

The sachem of the tribe or tribal chief is chosen by the chiefs of the gentes.

There is sometimes a grand council of the gens, composed of the councillors of the gens proper and all the heads of households and leading men—brothers and sons.

There is also sometimes a grand council of the tribe, composed of the council of the tribe proper and the heads of households of the tribe and all the leading men of the tribe.

These grand councils are convened for special purposes.

METHODS OF CHOOSING AND INSTALLING COUNCILLORS AND CHIEFS.

The four women councillors of the gens are chosen by the heads of households—themselves being women. There is no formal election, but frequent discussion is had over the matter from time to time, in which a sentiment grows up within the gens and throughout the tribe that, in the event of the death of any councillor, a certain person will take her place.

In this manner there is usually one, two, or more potential councillors in each gens who are expected to attend all the meetings of the council, though they take no part in the deliberations and have no vote.

When a woman is installed as councillor a feast is prepared by the gens to which she belongs and to this feast all the members of the tribe are invited. The woman is painted and dressed in her best attire and the sachem of the tribe places upon her head the gentile chaplet of feathers, and announces in a formal manner to the assembled guests that the woman has been chosen a councillor. The ceremony is followed by feasting and dancing, often continued late into the night.

The gentile chief is chosen by the council women after consultation with the other women and men of the gens. Often the gentile chief is a potential chief through a period of probation. During this time he attends the meetings of the council, but takes no part in their deliberations, and has no vote.

At his installation, the council women invest him with an elaborately ornamented tunic, place upon his head a chaplet of feathers, and paint the gentile totem on his face. The sachem of the tribe then announces to the people that the man has been made chief of the gens, and admitted to the council. This is also followed by a festival.

The sachem of the tribe is selected by the men belonging to the council of the tribe. Formerly the sachemship inhered in the Bear gens but at present he is chosen from the

Deer gens, from the fact, as the Wyandots say, that death has carried away all the wise men of the Bear gens.

The chief of the Wolf gens is the herald and the sheriff of the tribe. He superintends the erection of the council-house and has the care of it. He calls the council together in a formal manner when directed by the sachem. He announces to the tribe all the decisions of the council, and executes the directions of the council and of the sachem.

Gentile councils are held frequently from day to day and from week to week, and are called by the chief whenever deemed necessary. When matters before the council are considered of great importance, a grand council of the gens may be called.

The tribal council is held regularly on the night of the full moon of each lunation and at such other times as the sachem may determine; but extra councils are usually called by the sachem at the request of a number of councillors.

Meetings of the Gentile councils are very informal, but the meetings of the tribal councils are conducted with due ceremony. When all the persons are assembled, the chief of the Wolf gens calls them to order, fills and lights a pipe, sends one puff of smoke to the heavens and another to the earth. The pipe is then handed to the sachem, who fills his mouth with smoke, and, turning from left to right with the sun, slowly puffs it out over the heads of the councillors, who are sitting in a circle. He then hands the pipe to the man on his left, and it is smoked in turn by each person until it has been passed around the circle. The sachem then explains the object for which the council is called. Each person in the way and manner he chooses tells what he thinks should be done in the case. If a majority of the council is agreed as to action, the sachem does not speak, but may simply announce the decision. But in some cases there may be protracted debate, which is carried on with great deliberation. In case of a tie, the sachem is expected to speak.

It is considered dishonorable for any man to reverse his decision after having spoken.

Such are the organic elements of the Wyandot government.

FUNCTIONS OF CIVIL GOVERNMENT.

It is the function of government to preserve rights and enforce the performance of duties. Rights and duties are co-relative. Rights imply duties, and duties imply rights. The right inhering in the party of the first part imposes a duty on the party of the second part. The right and its co-relative duty are inseparable parts of a relation that must be maintained by government; and the relations which governments are established to maintain may be treated under the general head of rights.

In Wyandot government these rights may be classed as follows:

First—Rights of marriage.

Second—Rights to names.

Third—Rights to personal adornments.

Fourth—Rights of order in encampments and migrations.

Fifth—Rights of property.

Sixth—Rights of person.

Seventh—Rights of community.

Eighth—Rights of religion.

To maintain rights, rules of conduct are established, not by formal enactment, but by regulated usage. Such custom-made laws may be called regulations.

MARRIAGE REGULATION.

Marriage between members of the same gens is forbidden, but consanguineal marriages between persons of different gentes are permitted. For example, a man may not marry his mother's sister's daughter, as she belongs to the same gens with himself; but he can marry his father's sister's daughter, because she belongs to a different gens.

Husbands retain all their rights and privileges in their own gentes, though they live with the gentes of their wives.

Children, irrespective of sex, belong to the gens of the mother. Men and women must marry within the tribe. A woman taken to wife from without the tribe must first be adopted into some family of a gens other than that to which the man belongs. That a woman may take for a husband a man without the tribe he must also be adopted into the family of some gens other than that of the woman. What has been called by some ethnologists endogamy and exogamy, are correlative parts of one regulation, and the Wyandots, like all other tribes of which we have any knowledge in North America, are both endogamous and exogamous.

Polygamy is permitted, but the wives must belong to different gentes. The first wife remains the head of the household. Polyandry is prohibited. A man seeking a wife consults her mother, sometimes direct, and sometimes through his own mother. The mother of the girl advises with the women councillors to obtain their consent, and the young people usually submit quietly to their decision. Sometimes the women councillors consult with the men.

When a girl is betrothed, the man makes such presents to the mother as he can. It is customary to consummate the marriage before the end of the moon in which the betrothal is made. Bridegroom and bride make promises of faithfulness to the parents and women councillors of both parties. It is customary to give a marriage feast in which the gentes of both parties take part. For a short time at least, bride and groom live with the bride's mother, or rather in the original household of the bride.

The time when they will set up housekeeping for themselves is usually arranged before marriage.

In the event of the death of the mother, the children belong to her sister or to her nearest female kin, the matter being settled by the council women of the gens. As the children belong to the mother, on the death of the father the mother and children are cared for by her nearest male relative until subsequent marriage.

NAME REGULATIONS.

It has been previously explained that there is a body of names, the exclusive property of each gens. Once a year at the green-corn festival, the council women of the gens select the names for the children born during the previous year, and the chief of the gens proclaims these names at the festival. No person may change his name, but every person, man or woman, by honorable or dishonorable conduct, or by remarkable circumstance, may win a second name commemorative of deed or circumstance, which is a kind of title.

REGULATIONS OF PERSONAL ADORNMENT.

Each clan has a distinctive method of painting the face, a distinctive chaplet to be worn by the gentile chief and council women when they are inaugurated, and subsequently at festival occasions, and distinctive ornaments for all its members, to be used at festivals and religious ceremonies.

REGULATIONS OF ORDER IN ENCAMPMENT AND MIGRATIONS.

The camp of the tribe is in an open circle or horse-shoe, and the gentes camp in following order, beginning on the left and going around to the right:

Deer, Bear, Highland Turtle (striped), Highland Turtle (black), Mud Turtle, Smooth Large Turtle, Hawk, Beaver, Wolf, Sea Snake, Porcupine.

The order in which the households camp in the gentile group is regulated by the gentile councillors and adjusted from time to time in such a manner that the oldest family is placed on the left, and the youngest on the right. In migrations and expeditions the order of travel follows the analogy of encampment.

PROPERTY RIGHTS.

Within the area claimed by the tribe each gens occupies a smaller tract for the purpose of cultivation. The right of

the gens to cultivate a particular tract is a matter settled in the council of the tribe, and the gens may abandon one tract for another only with the consent of the tribe. The women councillors partition the gentile land among the householders, and the household tracts are distinctly marked by them. The ground is re-partitioned once in two years. The heads of households are responsible for the cultivation of the tract, and should this duty be neglected the council of the gens calls the responsible parties to account.

Cultivation is communal; that is, all of the able-bodied women of the gens take part in the cultivation of each household tract in the following manner:

The head of the household sends her brother or son into the forest or to the stream to bring in game or fish for a feast; then the able-bodied women of the gens are invited to assist in the cultivation of the land, and when this work is done a feast is given.

The wigwam or lodge and all articles of the household belong to the woman—the head of the household—and at her death are inherited by her eldest daughter, or nearest of female kin. The matter is settled by the council women. If the husband die his property is inherited by his brother or his sister's son, except such portion as may be buried with him. His property consists of his clothing, hunting and fishing implements and such articles as are used personally by himself.

Usually a small canoe is the individual property of the man. Large canoes are made by the male members of the gentes, and are the property of the gentes.

RIGHTS OF PERSON.

Each individual has a right to freedom of person and security from personal and bodily injury, unless adjudged guilty of crime by proper authority.

COMMUNITY RIGHTS.

Each gens has the right to the services of all its women

in the cultivation of the soil. Each gens has the right to the service of all its male members in avenging wrongs, and the tribe has the right to the service of all its male members in time of war.

RIGHTS OF RELIGION.

Each phratry has the right to certain religious ceremonies and the preparation of certain medicines.

Each gens has the exclusive right to worship its tutelar god, and each individual has the exclusive right to the possession and use of a particular amulet.

CRIMES.

The violations of rights are crimes. Some of the crimes recognized by the Wyandottes are as follows :

- | | |
|--------------|----------------|
| 1. Adultery. | 4. Murder. |
| 2. Theft. | 5. Treason. |
| 3. Maiming. | 6. Witchcraft. |

A maiden guilty of fornication may be punished by her mother or female guardian, but if the crime is flagrant and repeated, so as to become a matter of general gossip, and the mother fails to correct it, the matter may be taken up by the council women of the gens.

A woman guilty of adultery, for the first offense is punished by having her hair cropped; for repeated offenses her left ear is cut off.

THEFT.

The punishment for theft is two-fold restitution. When the prosecutor and prosecuted belong to the same gens, the trial is before the council of the gens, and from it there is no appeal. If the parties involved are of different gentes, the prosecutor, through the head of his household, lays the matter before the council of his own gens; by it the matter is laid before the gentile council of the accused in a formal manner. Thereupon it becomes the duty of the council of the accused to investigate the facts for themselves, and to

settle the matter with the council of the plaintiff. Failure thus to do is followed by retaliation in the seizing of any property of the gens which may be found.

MAIMING.

Maiming is compounded, and the method of procedure in prosecution is essentially the same as for theft.

MURDER.

In the case of murder, if both parties are members of the same gens, the matter is tried by the gentile council on complaint of the head of the household, but there may be an appeal to the council of the tribe. Where the parties belong to different gentes, complaint is formally made by the injured party, through the chief of his gens, in the following manner:

A wooden tablet is prepared, upon which is inscribed the totem or heraldic emblem of the injured man's gens, and a picture writing setting forth the offence follows.

The gentile chief appears before the chief of the council of the offender, and formally states the offence, explaining the picture-writing, which is then delivered.

A council of the offender's gens is thereupon called and a trial is held. It is the duty of this council to examine the evidence for themselves and to come to a conclusion without further presentation of the matter on the part of the person aggrieved. Having decided the matter among themselves, they appear before the chief of the council of the aggrieved party to offer compensation.

If the gens of the offender fail to settle the matter with the gens of the aggrieved party, it is the duty of his nearest relative to avenge the wrong. Either party may appeal to the council of the tribe. The appeal must be made in due form, by the presentation of a tablet of accusation.

Inquiry into the effect of a failure to observe prescribed formalities developed an interesting fact. In procedure

against crime, failure in formality is not considered a violation of the rights of the accused, but proof of his innocence. It is considered supernatural evidence that the charges are false. In trials for all offences forms of procedure are, therefore, likely to be earnestly questioned.

TREASON.

Treason consists in revealing the secrets of the medicine preparations or giving other information or assistance to enemies of the tribe, and is punished by death. The trial is before the council of the tribe.

WITCHCRAFT.

Witchcraft is punished by death, stabbing, tomahawking, or burning. Charges of witchcraft are investigated by the grand council of the tribe. When the accused is adjudged guilty, he may appeal to supernatural judgment. The test is by fire. A circular fire is built on the ground through which the accused must run from east and west, and from north to south. If no injury is received, he is adjudged innocent; if he falls into the fire, he is adjudged guilty. Should a person accused or having the general reputation of practising witchcraft become deaf, blind, or have sore eyes, earache, headache, or other diseases considered loathsome, he is supposed to have failed in practising his arts upon others and to have fallen a victim to them himself. Such cases are most likely to be punished.

OUTLAWRY.

The institution of outlawry exists among the Wyandots in a peculiar form. An outlaw is one who by his crimes has placed himself without the protection of his clan. A man can be declared an outlaw by his own clan, who thus publish to the tribe that they will not defend him in case he is injured by another. But usually outlawry is declared only after trial before the tribal council.

The method of procedure is analogous to that in case of murder. When the person has been adjudged guilty, and sentence of outlawry declared, it is the duty of the chief of the Wolf clan to make known the decision of the council. This he does by appearing before each clan in the order of its encampment, and declaring in terms the crime of the outlaw and the sentence of outlawry, which may be either of two grades.

In the lowest grade it is declared that, if the man shall thereafter continue in the commission of similar crimes, it will be lawful for any person to kill him; and if killed, rightfully or wrongfully, his clan will not avenge his death.

Outlawry of the highest degree makes it the duty of any member of the tribe who may meet with the offender to kill him.

MILITARY GOVERNMENT.

The management of military affairs inheres in the military council and chief. The military council is composed of all the able-bodied men of the tribe; the military chief is chosen by the council from the Porcupine gens. Each gentile chief is responsible for the military training of the youth under his authority. There is usually one or more potential military chiefs who are the close companions and assistants of the chief in time of war, and in case of the death of the chief take his place in the order of seniority.

Prisoners of war are adopted into the tribe or killed. To be adopted into the tribe it is necessary that the prisoner should be adopted into some family. The warrior taking the prisoner has the first right to adopt him, and his male or female relatives have the right in the order of their kinship. If no one claims the prisoner for this purpose he is caused to run the gauntlet, as a test of his courage.

If at his trial he behaves manfully, claimants are not wanting, but if he behaves disgracefully he is put to death.

FELLOWHOOD.

There is an interesting institution found among the Wyandots, as among some other of our North American tribes, namely, that of fellowhood. Two young men agree to be perpetual friends to each other, or more than brothers. Each reveals to the other the secrets of his life, and counsels with him on matters of importance, and defends him from wrong and violence, and at his death is chief mourner.

The government of the Wyandots, with the social organization upon which it is based, affords a typical example of tribal Government throughout North America. Within that area there are several hundred distinct governments. In so great a number there is great variety, and in this variety we find different degrees of organization, the degrees of organization being determined by the differentiation of the functions of the government and the correlative specialization of organic elements.

Much has yet to be done in the study of these governments before safe generalizations may be made. But enough is known to warrant the following statement:

Tribal government in North America is based on kinship in that the fundamental units of social organization are bodies of consanguineal kindred either in the male or female line: these units being what has been well denominated "gentes."

These "gentes" are organized into tribes by ties of relationship and affinity, and this organization is of such a character that the man's position in the tribe is fixed by his kinship. There is no place in a tribe for any person whose kinship is not fixed, and only those persons can be adopted into the tribe who are adopted into some family with artificial kinship specified. The fabric of Indian society is a complex tissue of kinship. The warp is made of streams of kinship blood, and the woof of marriage ties.

With most tribes military and civil affairs are differentiated. The functions of civil government are in general differentiated only to this extent, that executive functions are performed by chiefs and sachems, but these chiefs and sachems are also members of the council. The council is legislature and court. Perhaps it were better to say that the council is the court whose decisions are law, and that the legislative body properly has not been developed.

In general crimes are well defined. Procedure is formal, and forms are held as of such importance that error therein is *prima facie* evidence that the subject matter formulated was false.

When one gens charges crime against a member of another, it can of its own motion proceed only to retaliation. To prevent retaliation, the gens of the offender must take the necessary steps to disprove the crime, or to compound or punish it. The charge once made is held as just and true until it has been disproved, and in trial the cause of the defendant is first stated. The anger of the prosecuting gens must be placated.

In the tribal governments there are many institutions, customs, and traditions which give evidence of a former condition in which society was based, not upon kinship, but upon marriage.

From a survey of the facts it seems highly probable that kinship society, as it exists among the tribes of North America, has developed from connubial society, which is discovered elsewhere on the globe. In fact, there are a few tribes that seem scarcely to have passed that indefinite boundary between the two social states. Philologic research leads to the same conclusion.

Nowhere in North America have a people been discovered who have passed beyond tribal society to national society based on property, *i. e.*, that form of society which is characteristic of civilization. Some peoples may not have reached kinship society; none have passed it.

Nations with civilized institutions, art with palaces, monotheism as the worship of the Great Spirit, all vanish from the priscan condition of North America in the light of anthropologic research. Tribes with the social institutions of kinship, art with its highest architectural development exhibited in the structure of communal dwellings, and polytheism in the worship of mythic animals and nature-gods remain.

TWENTY-SEVENTH REGULAR MEETING.

OCTOBER 5, 1880.

Scheme of the Tenth Census for the Enumeration of Untaxed Indians.

By GARRICK MALLERY.

The speaker exhibited the schedules prepared by the Bureau of Ethnology for this purpose and explained the object of the inquiries made therein.

✧ Ossuary at Accotink, Va.

By E. R. REYNOLDS.

This ossuary was discovered on the 15th of April, 1869 by a party of gentlemen from the Shenandoah Valley. It is situated on the farm of Lewis Ashton, Esq., Fairfax County, near the confluence of Accotink Creek and the Potomac, at Marlborough. The cutting of its banks by the creek revealed human remains and implements. Mr. Printz and other members of the party succeeded in recovering the bones of twelve very large Indians. They had been buried with their feet to the east under a stratum of earth six feet deep. The skeleton appeared to be between six and seven feet long, and correspondingly large in other respects.

Around the head of one of the skeletons were four oblong shells set vertically in the soil and lapping past each other like the scales of a fish. Each shell was about six inches long by four inches wide. A human face in tolerably high relief, was carved upon each, and also five grooves or "tallies." In addition to these, a fifth shell was found lying near the head. It was about four inches in diameter and nearly circular in shape, with a rudely carved human face on the sand in tolerably high relief. Next to this semi-circle of shells were found four round shells smoothly carved and polished. Each was about four inches in diameter, and had several perforations. Another perforated shell was found; this, however, was only an inch and a half in diameter. Next, six circular disks of copper were discovered, ranging from two and a half to six inches in diameter. These were also perforated like the shells. In another direction they unearthed six oblong plates of copper, ranging from three to four inches in width and from five to seven inches in length. Four small shells, each about four inches in length were found in another pile near the central skeleton, and near by about four quarts of beads made of rolled copper cylinders, bone, clay, and shell. The copper beads were from one and a half to two inches long, and were strung upon what appeared to be a thread having a coarse linen texture. The thread was in a good state of preservation, and the fragments exhibited still show the character of the material used.

In another part of the mound or ossuary six small triangular pieces of copper were found, two earrings made of rolled brass tubes, a beautiful pipe made of stone with copper ornaments attached, and other finely finished stone pipes. Two small copper bells shaped like modern sleigh-bells and an earthen dish were found in rear of the head and other objects named. A cross of white metal of rude construction was found in an erect position, sustained by the earth, between the thumb and fore-finger of the skeleton. The other eleven skeletons had nothing about them but beads. All were in an excellent state of preservation. The

mound has been washed entirely away by the freshets, and nothing remains to mark its former position.

TWENTY-EIGHTH REGULAR MEETING.

OCTOBER 19, 1880.

An Inquiry Into the History and Identity of the Shawnee Indians.

By C. C. ROYCE.

Mr. Royce said his paper should be considered as merely tentative and subject to corrections of either a minor or radical character as the results of future inquiries may justify.

The Shawnees were the Bedouins and one may almost say the Ishmaelites of the North American tribes. As wanderers they were without rivals among their race, and as fomenters of discord their genius was marked. Their original home is not certainly known. It is not probable that it ever will be. 1st. In the year 1608, Captain John Smith, of Virginia, in voyaging up the Chesapeake found the neighboring tribes living in dread of a tribe known to them as "Massawomekes," who lived beyond the mountains, whence the Potomac River has its sources, upon a great salt water or lake. He encountered seven canoes full of them at the head of the bay and remarks that their dexterity in their canoes, made of the bark of trees, and well luted with gum, gave evidence of their residence upon some great water.

Smith's map of 1629, locates the Massawomekes upon the south shore of a supposed large body of water in about the direction and location of Lake Erie.

Gallatin and Bancroft have assumed that the Massawomekes and the Five Nations were identical. In contradiction of this is the fact that at the date of Smith's travels, the most westerly of the Five Nations—the Seneca—was not in possession of the country west of the Genesee River. From that

river westward to and beyond Niagara River resided a nation known to history as the Attiwondaronk, or Neuter Nation, who were not defeated and dispersed by the Five Nations until 1651, more than forty years subsequent to Smith's observations. To reach the country of the latter from Chesapeake Bay the Susquehanna River would have been the most natural course to pursue. The Massawomekes returning home pursued a northwest direction beyond the mountains which would have been an unnatural and inconvenient route to reach the country of the Five Nations. It is assumed, then, that the Massawomekes occupied the south and southwest shore of Lake Erie and controlled the country from there to the Alleghany mountains.

2d. During the first half of the seventeenth century there existed on the south shore of Lake Erie in the identical territory above assigned to the Massawomekes, a nation of Indians known as the "Eries," "Rique," or "Chats." The Jesuits visited them as early as 1626, and were unsuccessful in attempting to establish missions among them. They were overthrown and dispersed by the Five Nations about 1655 and no subsequent mention is made of them as a nation.

3d. Colden in his history of the Five Nations relates that shortly prior to the French settlement of Canada, the Five Nations had been driven by the Andirondacks, from the neighborhood of Montreal to the banks of the lakes on which they subsequently lived. There they turned their arms against the "Satanas" who lived to the west of them on the banks of the lakes, and in a few years subdued and drove them from the country. This relation is doubtless borrowed from the narrative of Nicholas Perot, who lived among the Indians for more than thirty years subsequent to 1665. These "Satanas" are mentioned by Colden as synonymous with the "Shaonons," or, as Perot calls them, "Chaoua nons."

Here, then, we have in the earliest history of the country the names of three tribes who by the accounts of different

and widely separated travelers, occupied the same region of country, viz :

- 1st. The "Massawomekes" of Smith.
- 2d. The "Eries," or "Chats," of the Jesuit relations, and
- 3d. The "Satanas" of Colden, and "Chaouanons" of Perot.

By all accounts given of these people they were numerous and powerful. Each occupied and controlled a large region of territory in the same general locality; each had so far as known long been the occupant thereof. Neither of the authorities cited speaks of more than one nation occupying this region; neither seems to have had any knowledge or tradition of any other nation having done so. It is improbable that three numerous and warlike nations should within the historic period have occupied so limited a region without any account or tradition having survived of their intercourse and conflicts with each other. These facts constitute strong evidence that three such distinct nations never had a contemporaneous existence, and that the Massawomekes, Eries and Satanass or Chaouanons, were one and the same people.

This identity having been assumed, and the Eries having by all accounts been conquered and dispersed about 1655, it remains to trace the remnant in their wanderings, which is a most difficult and unsatisfactory task.

It may be remarked at this point that a manuscript map still exists in Holland of the date of 1614 or 1616, whereon a nation of Indians called "Sawwoaneu" is marked as living on the east bank of Delaware River. De Laet, also, in his history (edition of 1640) enumerates the "Sawanoos" as one of the tribes then inhabiting the Delaware River. Vanderdonck's map of New Netherlands, dated 1656, assigns the "Sauwanoos" position on the west bank of the Zuydt (now Delaware) River, between the present sites of Philadelphia and Trenton.

It is not impossible that, during the conflicts between the Satanass and Five Nations, a body of the former may have

become segregated from their friends and terminated their wanderings by a settlement on the Delaware.

The Eries being overthrown, the survivors driven from their ancient homes and deprived of the lake as a principal source of food supply, were forced to resort more extensively to the chase as a means of subsistence, the tendency of which would be to divide the tribe into small hunting parties, and encourage the wandering propensities so often remarked of the Shawnees.

In 1669 a Shawnee prisoner offered to guide La Salle from Lake Ontario to the Ohio River, with which region he (the Shawnee) was familiar and in which he probably resided. The "Illinois" informed Marquette, in 1670, that the "Chaouanons" lived thirty days' journey southeast of their country.

In 1672, Father Marquette locates the "Chaouanons" on the Ohio River in twenty-three villages. In 1680 a "Chaouanon" chief, living on a great branch of the Ohio, sent to La Salle to form an alliance.

The map accompanying Marquette's journal, published in 1681, locates the "Chaouanons" on the Ohio River, near the Mississippi; but on his original manuscript map they are located in a vast unexplored region far to the east of the Mississippi, in about the latitude of the middle or upper Ohio.

In 1682, La Salle took possession of the country east of the Mississippi, from its mouth to the Ohio, with the consent of the "Chaouanons," "Chichachas," *et al.*

"Joutel," the companion of La Salle, remarks that the Shawanoes "formerly lived on the borders of Virginia and the English colonies."

Father Gravier, in 1700, speaks of the "Chaouanoua" as living upon a main branch of the Ohio, coming from the S.S.W.

De Lisle's map of 1700 places the "Ontouagannha" (a Jesuit synonym for Shawnee) on the headwaters of the Santee and Great Pedee rivers, in South Carolina, and the "Chiononons" on the Tennessee River, near its mouth. A portion

of this band of "Ontouagannha" getting into trouble with their neighbors, came up to Pennsylvania with the consent of the Susquehannocks, and settled at Conestoga in 1698. Four years earlier a few of this band had, at the request of the "Minsis," been allowed to settle on the Delaware River among the latter. Other straggling parties joined these bands from time to time, rendering the Shawnees at last quite numerous and powerful in Pennsylvania.

John Senex's map of North America, of 1710, indicates villages of "Chaouenons" on the headwaters of South Carolina, but apparently locates the main body along the upper waters of the Tennessee River.

"Moll's" map of 1720 does not indicate the presence of any Chaouanons on the Tennessee River, but covers their former territory with "Charakeys." This bears out the story of the French trader mentioned in Ramsey's Tennessee, who was among the Shawnees on Cumberland River, in 1714, and says that about this time they were expelled by the Cherokees and Chickasaws. On this map of Moll's is found, at the mouth of the Cumberland (or Sault) River, the words "Savannah Old Settlement," indicating probable abandonment, a few years prior, in their gradual withdrawal to the north side of the Ohio River.

Prior to 1714, a band of "Chaouanons," probably wanderers from the Cumberland and Tennessee country, lived for a short time within two leagues of the fort at Mobile, Ala.

Another band, likely an offshoot from the South Carolina faction, found a home at Oldtown, Md., a few miles below Cumberland, and was doubtless the band with whom William Penn concluded a treaty in 1701 at Philadelphia.

Between the ejection of the Shawnees from the Cumberland and Tennessee valleys and the middle of the eighteenth century, their appearance in history is rare. They doubtless occupied portions of Ohio and Indiana. Emanuel Bowen's map, published in 1752, locates a "village de Chouanons" on the north side of the Ohio River, midway between the mouths of the Kanawha and Scioto. That branch of the

tribe in Pennsylvania, meanwhile, became the most numerous and important portion of the Shawnee people. Owing to the encroachments of the white population, they were gradually forced back until, about 1750, they began a migration to the Ohio country, where they united with their western brethren. They aided the French in the war of 1755, especially at Braddock's defeat.

In 1756 an expedition against them under Major Lewis was a failure. In 1764, Colonel Boquet's expedition resulted in temporary peace with them. In 1774 they were defeated, with their allies, at Point Pleasant, Va. In 1780, General George Rogers Clarke burnt their towns on Mad River, and in 1782 repeated it on the Miami. In 1790 and 1791 they participated in the defeats of Generals Harmar and St. Clair respectively. In 1794 they, with others, were defeated by General Wayne, and were parties to the treaty of 1795, whereby the southern two-thirds of Ohio and a portion of Indiana were ceded to the United States. They have been parties to numerous treaties since that date, whereby their claims to territory have been gradually relinquished.

In the interval between Wayne's treaty and the war of 1812, the Shawnees again became hostile, and the forces of Tecumseh, under command of his brother, the prophet, were defeated at Tippecanoe, in 1811, while Tecumseh himself was killed at the battle of the Thames, in 1813.

By the treaty of 1817, three small tracts were reserved for the occupancy of the Shawnees in northwestern Ohio, which were in turn ceded to the United States, in 1831, preparatory to their removal west of the Mississippi River. A reserve was provided for the mixed Senecas and Shawnees in Indian Territory, where they now reside, and another in Kansas for the Shawnees alone, to which, in company with a portion of their people, who had been living in Missouri since 1793, they removed and again became united. A portion of this reserve was ceded to the United States, in 1854, and in 1869, after having sold the remainder of their lands in Kansas, they removed to Indian Territory, and merged

their tribal existence with the Cherokees. A number of Shawnees who, just prior to and during the late rebellion, wandered off to Texas and Mexico, returned after the war and were provided with a separate home in Indian Territory, under the name of "Absentee Shawnees." These latter, together with those confederated with the Senecas in the northeastern part of Indian Territory, are all of the once powerful "Massawomekes" now left to maintain the tribal name of "Shawnee."

Civilization.

By M. B. W. HOUGH.

The aim of this paper seemed to be chiefly to enforce the truth which is embodied in the adage, *cælum non animum mutant qui trans mare currunt*. There is a succession of qualities practically parallel with the current of life. Culture to be successful with a people must be adapted to their character. The mere communication of knowledge will not civilize a race. Civilization must be inherent and therefore of slow development. So long as the features of the ancestor are repeated in his descendants, will the traits of his character reappear. Language may change, customs be left behind, races may migrate from place to place, and subsist on whatever the country they occupy affords, but their fundamental characteristics will survive, these are comparatively uninfluenced by the mere accidents of nutrition.

Mr. Hough then proceeded to consider some of the elements of civilization, among which he recognizes marriage, war, slavery, caste, a measure of value, money, &c., each of which he treated at length. Any form of marriage is better than no marriage; polygamy even has its advantages as a system of marriage. War laid the foundation for landed proprietorship, which, whatever its present or future evils, has been in the past a powerful engine of progress. Slavery even

has played a part in civilization and lies at the bottom of the industrial social state. Indirectly too, slavery has been beneficial. The most unnatural forms, as for example that formerly existing in the United States, have upon the whole worked to the advantage of the slave. Caste in India led to the division of labor; in feudal Europe it led to political organization. Money and the conception of property mark a great stride in social progress.

The speaker gave as the true tests of civilization: 1. The degree to which the powers of nature are made conducive to the well-being of man; and 2, the degree to which man has learned to conform to the laws of nature. He would exclude from the true civilizing agencies the ceremonial part of social existence, the forms of religion, and much that passes for culture. The remainder of the paper was devoted to the elaboration and historical illustration of these general principles.

TWENTY-NINTH REGULAR MEETING.

NOVEMBER 2, 1880.

No quorum present, by reason of the National election.

THIRTIETH REGULAR MEETING.

NOVEMBER 16, 1880.

h
Tuckahoe, or Indian Bread.

By J. H. GORE.

Food
7

The speaker first mentioned the circumstances which suggested this subject for investigation, and the unsettled condition of the various theories concerning its nature and use. The early writers attributed to Tuckahoe great nutritive qualities; so in order to determine its exact value as an ar-

ticle of sustenance for the Indians, it was necessary to ascertain the geographic distribution of Tuckahoe, and its prevalence in these localities. This was accomplished by sending circulars of inquiry through the Smithsonian Institution to nearly every Cryptogamic Botanist in the United States, to Curators of Natural History Museums and to the newspapers along the Atlantic coast and in the Mississippi Valley. It was found that it is more or less abundant in the Coast States from New Jersey to Florida, and in Kansas and Arkansas. The question: Did its growth depend upon circumstances then existing? was answered by giving an outline of the process of its development, and specimens were exhibited by way of proof.

Likewise the means by which it might have been found by the nations if its value as food was sufficient to pay for the trouble. Its exact nutritive value was determined by an analysis made by Dr. Parsons, which gave only three-fourths of one per cent. of nitrogenous matter; this being insufficient to repair the waste in the animal tissues it was pronounced valueless as food. The speaker then suggested that there must have been other roots called Tuckahoe, and quoted from a number of histories showing that a root by this name was frequently described entirely different from the one in question; and finally succeeded in identifying five roots which were once known as Tuckahoe. Also the derivation of the word Tuckahoe given the speaker by the distinguished Ethnologist, Dr. Trumbull, shows that it is from *ptuckqui*, meaning something round or rounded, and not from a word meaning bread, as heretofore supposed. The conclusion then given was, that Tuckahoe was a term applied to *all* roots which were made esculent by cooking. Finally, all of these except *Pachyma cocos* received a special name, this alone retaining the appellation of Tuckahoe, and that when we read of Tuckahoe as contributing so largely toward the support of the aborigines we can only know that all edible tubers were referred to. The paper was illustrated by six large charts giving twelve botanic synonyms, eight affinities, five roots,

once known as Tuckahoe; an analysis, one of these showing that it was nutritive; ten Indian synonyms, and an analysis of Tuckahoe.

Indian Mounds in the Shenandoah Valley.

By E. R. REYNOLDS.

Mr. Reynolds read a paper on an Indian Mound, nine miles southwest of Luray, in the Valley of the South Shenandoah. The mound is situated at the eastern base of the Massanutton Mountain, on the farm of Mr. Phillip Long. It was, according to Kercheval, originally about twelve or fourteen feet high by thirty feet in diameter. It is now but two and a-half feet high. In opening the mound a stratum of hard, fire-baked clay was found at the bottom, on which reposed the remains of the Indian to whose memory the mound was erected. Around the remains were found a large and miscellaneous collection of ornaments and weapons, many of which were seriously injured by the cremation fire.

THIRTY-FIRST REGULAR MEETING.

DECEMBER 7, 1880.

Superstitions.

By A. S. GATCHET.

This phase of the human mind manifests itself in so many ways that the definitions given by Webster and others do not cover the whole ground. It is a belief in a known or unknown physical power operating within us or outside of us, and having a supernatural influence upon our bodies or our minds, in such a manner that the future may be foreseen and its events controlled.

The causes of superstition are egotism and the instinct of self-preservation. The forces of nature and its phenomena

can work us good or harm, and influence over them will give us an advantage over our fellow beings.

The religions of the world are connected more or less with superstition, many of the Pagan forms of worship containing little or nothing else. The peculiar garb in which it clothes itself is the badge or mark of a certain grade of civilization. As it progresses in its evolution it becomes more and more connected with morality.

The speaker then discussed at length the subjects of symbolism, dreams, astrology, augury, prognostics, cheiromancy, superstitions referring to animals, plants, and the occupations of life.

Superstitions are to be numbered by the million. Every year old ones die, new ones arise. Ignorance of the true causes of things, and an innate desire to account for them, lead all peoples to render a reason which is on a plane with their intelligence.

The folk-lore societies and many private individuals are engaged in collecting these fabulous stories. They are of scientific value only as they lead to a deeper insight into the psychology of those who believe in them. In the collection of them the most profound sympathy must exist between the student and his subject. Properly understood they contribute to the advancement of ethnology, psychology, and linguistic science.

Mr. Gatschet then proceeded to give some examples of superstition gathered from our North American Indians, dividing his subject as follows:

- I. Superstitions connected with hunting.
- II. Superstitions connecting with fishing.
- III. Those connected with daily life, as sneezing, combing the hair, eating, dreaming, journeying, barrenness, observance of days, tabu, medicine.
- IV. Those connected with certain species of natural objects, as stormy petrels, gulls, wild geese, bears, foxes, ants, totemic animals.
- V. Those connected with extraordinary phenomena, as

meteors, northern-lights, eclipses, great floods, lightning, bleeding at the nose, the birth of twins, lucky numbers.

In order to show the scope of the paper a few of the superstitions given are subjoined:

The Indians on the Huallaga (S. Am.) injures his *sarbacane* by shooting at a certain small yellow bird, and by discharging his arrow at a snake he will make the blow-tube as crooked as the snake itself.

Among a great variety of tribes widely separated silence is enjoined during the hunt.

The Cholos purge themselves severely and remain in the hammock until the moon changes, before a great hunt.

To become a good hunter you must kill a cougar, or grizzly bear, or eat the heart of a rattlesnake or of a slain enemy.

Whale-fishers of Alaska keep the bodies of celebrated hunters in caves. When they are about to go on a whaling cruise they put these corpses in water and then drink it so as to acquire great skill and prowess.

Sneezing is a sign that some one is thinking of you. Combing the hair after dark is a sign that one of our parents will not live long. Only old persons comb the hair in the evening.

Dreaming of hides always is a prognostic of great wealth.

If your shadow falls on a hill you will find no edible roots.

The Modocs will not kill a white deer unless there are many persons present.

On the Colorado River a meteor flying west is the "big man's" heart hastening to the ocean.

The polar light is among many tribes the dance of the dead.

In the double rainbow the faint arch is the grandmother of the bright one.

Among the Salinas (S. Am.) twins are the evidence of illicit intercourse, and the woman is punished.

THIRTY-SECOND REGULAR MEETING.

DECEMBER 21, 1880.

ol Savage and Civilized Orthography.

BY LESTER F. WARD.

This paper consists principally of remarks and strictures on the first chapter of the *Introduction to the Study of Indian Languages*.*

After quoting a preliminary paragraph from this work relating to the complexity and vagueness of the sounds in savage languages, Mr. Ward said that the two leading facts enunciated in it were: 1st, the multiplicity of sounds which the human races have embodied in speech; and 2d, the existence and prevalence of pseudo-sounds or the unstable forms of vocalic and articulate utterance which the author of the work quoted from designates as "synthetic or undifferentiated sounds." He claimed that philologists had failed sufficiently to recognize these two fundamental elements of linguistic study and proceeded to show from numerous examples drawn from the French, German, Italian, Spanish and English languages that these characteristics, so far from being confined to savage or barbaric tongues are common to all languages even the most cultured. The most general fact adduced in support of this view was that all foreigners in learning another language pronounce it at first, and generally always, with an "accent" peculiar to their vernacular, and that this accent is often the most marked in sounds which all the books teach to be common to both languages; as in the attempt of Germans to pronounce the English word "will."

He accounted for the multiplicity of languages on the globe on strictly natural principles. The facts of phonology not less than those of morphology are the result of origi-

* *Introduction to the Study of Indian Languages*, by J. W. Powell, Washington, 1880; 4^o.

nally fortuitous circumstances followed by strictly mechanical adaptation to the infinitely varying conditions of existence. The truth should be clearly recognized that there is no fixed limit to the number and variety of sounds which speech may embrace except that which the capacity of the organs of speech for producing such sounds presents. If all the adjustments of which these organs are capable could be definitely known and accurately described in terms of the mechanical changes necessary to produce them, and each such *species* of sound, as we may say, were then conveniently named according to the methods of science, then the various syllables of a new language might be referred to established orders and classes, genera and species, and the science of phonology historically established. It might then be seen how utterly fortuitous the character of every language has been within the limits of its possibilities, and the immense diversity of languages, not in their word-units and sentence-units alone, but in their sound-units as well, would be no more inexplicable than are the variations which we see in animal and plant forms. The primary principle in acquiring a foreign pronunciation is to learn and to adopt the accurate position of the organs of the mouth; in fact, could this in all cases be done, failure to pronounce correctly would be a physical impossibility, since the sound is in each case the mechanical result of the relations of the speaking organism and can no more differ from the character fixed by these relations than the pitch or *timbre* of a musical instrument can be other than that which its strings, keys, materials, &c., require it to be.

Mr. Ward then took up the letters and commented upon a considerable number of them with a view to pointing out undifferentiated sounds in modern languages, and also in order to emphasize certain errors into which different lexicographers have fallen and certain failures on their part to recognize distinctions almost universally made by English-speaking people. This was particularly striking in certain letters mentioned.

Vowels: *a*. What is called the short *a* in the French is a typical synthetic sound varying in the mouths of different speakers, even the best instructed, from that which it has in the English word *add* to the Italian sound as heard in *father*, which is scarcely more than a lengthening of the sound it acquires in the word *what* (equal to *o* in *not*), and fairly reaches this latter sound when heard in *pas*. In English, too, the *a* is sometimes of a very uncertain character, especially in such words as *last*, *glass*, *path*, &c.; also in such words as *bad*, *glad*, *mad*, *chaff*, *lag*, *salve*, *damp*, *rank*, *grant*, *gap*, *care*, *gas*. On these points lexicographers differ widely, and, as the speaker believed, much more widely than the public. The difficulty in most cases was held to be due chiefly to the imperfect discrimination by lexicographers of sounds which nearly all clearly distinguish in pronouncing, but which even those who do so can rarely recognize as unlike when the differences are pointed out by another. The only three authors who seem to have clearly perceived the true sound of *a* in the examples given are Fulton & Knight and Smart. All others, including Webster, Worcester, Walker, Johnston, Reid, Nares, Jameson, Sheridan, Perry, Knowles, Jones, and Craig, whose views had been carefully examined by the speaker, had denoted the sound of this letter in these circumstances by symbols which would, if followed, entirely alter the pronunciation of the English language.

- . Relative to the sound of the English *i*, while admitting of course that the long sound as heard in *mind* is a true diphthong, equivalent to the Italian sound of *a* followed quickly by the English long *e*, it was maintained that the English short *i*, as in *bit*, &c., is not a mere shortening of the continental *i*, but is a distinct sound which can be indefinitely prolonged without change or tendency to assimilate that sound.

To pass from the one sound to the other was shown to require a slight readjustment of the organs of the mouth.

- o. There is one sound of the English *o* which is clearly synthetic, viz, that heard in the word *whole*; but this is the only word to which it applies, and uninstructed people vary it through the entire range of sounds from that of the *u* in *hull* to that of the *o* in *hole*. In French, however, this is the prevailing sound of the *o* and constitutes their short or unaccented *o*. It is there highly synthetic, being pronounced quite differently in different sections of France, and in the same section by different persons, and even in different words by the same person, cultivated as well as uncultivated. Numerous examples were given by the speaker.

The disagreements and misconceptions among lexicographers relative to this letter were shown to be similar to those in the case of the *a*, all of whom, for example, with the exception of Smart, give it the same sound in the words *dog*, *log*, *moss*, *cloth*, &c., as in the words *not*, *pod*, *bog*, &c. The speaker maintained that the former sound is identical with that of the *au* in *fraud*, or the *aw* in *law*.

- u. Great misapprehension exists with regard to the long sound of the *u*, whether to give it in any case the Continental sound represented by *oo* in English, or to make it a diphthong as in *blue* (=blew) consisting of the short sound of *i* prefixed to that sound. The word *rule* which Maj. Powell selects as the type of the former pronunciation is much more frequently given the latter, though this seems not to be sanctioned. The short sound of the *u* as in *pull* was held to be, like the short sound of *i*, a distinct sound capable of indefinite prolongation.

Diphthongs: The speaker maintained that there were gradations among the diphthongs according to the sounds given to the components which would considerably increase the number given by Major Powell. For example, besides the *ai* (mine) there may be *âi*, and besides *au* there may be both *âu* and *êu*, which last is more nearly the common pronunciation of the *ow* in *down*, the example given by him, and which is quite distinct from the German *au* as in *haus*. Only broad-spoken people give this sound in English. There are also gradations between the *ai* and the *âi* as exemplified by the German *eu*, *heute*, and *äü*, *häuser*. On the Continent the chief distinction is in the degree to which the two sounds are kept separate. In Italian and Spanish the combination in *au* is not regarded as a diphthong, the two letters constituting as many syllables.

Consonants: Mr. Ward next proceeded to remark upon certain of the consonants. The German *b* and *p*, *k* and *g*, as also to some extent *s*, *t*, and *d*, he regarded as synthetic. The Germans simply take no account, in pronouncing these letters, of the distinction between *surd* and *sonant*, they do not know in speaking whether the vocalize them or not. This exemplifies a principle which students of language should understand, viz, that in some languages *there are processes ignored in utterance*. Another example of this is found in the cockney pronunciation of *h*, where it does not belong and in omitting it where it should be heard. It is simply ignored and whether a word receives an aspiration or not depends upon rhetorical rather than orthographical considerations.

There is no line of demarkation between the aspirate and the guttural. Several steps of this interval are filled by the Spanish *j*, *g*, and *x*, and by the two sounds of the German *ch*.

It was maintained that the trilled *r* should not be confounded with the English *r*. The latter is *sui generis*. In the former, besides the distinctive vibratory motion of the tongue, it is placed much farther forward, in a position which is about the same as that required for the pronunciation of *l*, and to which sound, therefore, this is really more nearly allied than to that of the English *r*.

The sibilate sound *s* varies greatly in different languages, the tongue assuming a position farther and farther forward in pronouncing it, until it finally passes, in the Spanish *c* and *z*, into the *th* of the English.

The German *w* and Spanish *v* are not, like the English *v*, dento-labials, but pure labials, and much nearer allied to *b* than to *v*. In the former the lips are not allowed to come into contact, and air is passed between them, giving a sound resembling that of our *v*, but organically wholly distinct from it. In the latter the *v* and the *b* are not only to a large extent confounded in sound, but also in orthography, as is evidenced by the large number of words which are indifferently written with the one or the other letter—e. g. *bacia* or *vacia*, *baho* or *vaho*, *bulto* or *vulto*, &c.

THIRTY-THIRD REGULAR MEETING.

JANUARY 4, 1881.

No quorum present, by reason of a storm.

ANNUAL MEETING FOR THE ELECTION OF OFFICERS.

JANUARY 18, 1881.

2

ANNUAL ADDRESS OF THE PRESIDENT, J. W. POWELL.

1881.

On Limitations to the use of some Anthropologic Data.

GENTLEMEN :

The Constitution of the Anthropological Society of Washington makes it obligatory upon its President to deliver an address at the first meeting in February, upon the work of the Society during the preceding year.

Last year it had escaped the notice of the President that his annual address was limited to a specified topic, and he prepared for that occasion a paper on the "Evolution of Language." As his mistake was not discovered in time, he was permitted, through the courtesy of the society, to read the address prepared, with the undersanding that at some subsequent time the review provided by the Constitution should be presented by him. It thus occurs that the transactions of the society for a period of two years are embraced in the present address.

In preparing the present paper under the restrictions imposed by the Constitution, it has been found difficult to give an intelligent account of the subject-matter coming from time to time before the society, while the papers thereon were yet unpublished; and it was finally concluded to be the better way to prepare an abstract of the several papers and to follow with remarks upon the subject-matter therein presented.

In executing this plan the President's address of last year is incorporated.

In making these abstracts your President has attempted to seize the more important facts and conclusions presented,

and, to a large extent, has been compelled to do this in his own language. If injustice is done in any case by failure properly to appreciate the author, in palliation the President begs of gentlemen to believe that he has earnestly tried to do justice to each.

In reviewing the work of the past two years the papers are used as suggestive of a line of remarks rather than as objects of criticism.

Archæology.

On the Antiquities of the United States papers have been read, as follows:

RELIC HUNTING; by Frank H. Cushing.

OBSERVATIONS ON AZTEC AND GUATEMALAN ANTIQUITIES; by Otis T. Mason.

ARROW-HEAD MAKING; by Frank H. Cushing.

PROGRESS OF ARCHÆOLOGIC RESEARCH IN THE UNITED STATES; by Wills De Hass.

ABORIGINAL PAINT QUARRY; by Elmer R. Reynolds.

ABORIGINAL CEMETERIES NEAR PISCATAWAY, MD.; by Elmer R. Reynolds.

ON THE ABORIGINAL SHELL-HEAPS AT POPE'S CREEK, MARYLAND; by Elmer R. Reynolds.

Letter read by Mr. Riley.

TURTLE-BACK CELTS AND THEIR USES; by Elmer R. Reynolds.

SHELL-HEAPS OF SOUTH RIVER, MARYLAND; by J. D. McGuire.

THE MOUND-BUILDERS; AN INQUIRY INTO THEIR ASSUMED SOUTHERN ORIGIN; by Wills De Hass.

DUMBARTON ABORIGINAL SOAPSTONE QUARRY; by Elmer R. Reynolds.

OSSUARY AT ACCOTINCK, VA.; by Elmer R. Reynolds.

INDIAN MOUND IN THE VALLEY OF THE SHENANDOAH; by Elmer R. Reynolds.

Investigations in this department are of great interest, and have attracted to the field a host of workers; but a

general review of the mass of published matter exhibits the fact that the uses to which the material has been put have not always been wise.

In the monuments of antiquity found throughout North America, in camp and village sites, graves, mounds, ruins, and scattered works of art, the origin and development of art in savage and barbaric life may be satisfactorily studied. Incidentally, too, hints of customs may be discovered, but outside of this, the discoveries made have often been illegitimately used, especially for the purpose of connecting the tribes of North America with peoples or so-called races of antiquity in other portions of the world. A brief review of some conclusions that must be accepted in the present status of the science will exhibit the futility of these attempts.

It is now an established fact, that man was widely scattered over the earth at least as early as the beginning of the quaternary period, and, perhaps, in pliocene time.

If we accept the conclusion that there is but one species of man, as species are now defined by biologists, we may reasonably conclude that the species has been dispersed from some common centre, as the ability to successfully carry on the battle of life in all climes belongs only to a highly developed being; but this original home has not yet been ascertained with certainty, and when discovered, lines of migration therefrom cannot be mapped until the changes in the physical geography of the earth from that early time to the present have been discovered, and these must be settled upon purely geologic and paleontologic evidence. The migrations of mankind from that original home cannot be intelligently discussed until that home has been discovered, and, further, until the geology of the globe is so thoroughly known that the different phases of its geography can be presented.

The dispersion of man must have been anterior to the development of any but the rudest arts. Since that time the surface of the earth has undergone many and important

changes. All known camp and village sites, graves, mounds, and ruins, belong to that portion of geologic time known as the present epoch, and are entirely subsequent to the period of the original dispersion as shown by geologic evidence.

In the study of these antiquities, there has been much unnecessary speculation in respect to the relation existing between the people to whose existence they attest, and the tribes of Indians inhabiting the country during the historic period.

It may be said that in the pueblos discovered in the southwestern portion of the United States and farther south, through Mexico and perhaps into Central America, tribes are known having a culture quite as far advanced as any exhibited in the discovered ruins. In this respect then, there is no need to search for an extra-limital origin through lost tribes for any art there exhibited.

With regard to the mounds so widely scattered between the two oceans, it may also be said that mound building tribes were known in the early history of discovery of this continent and that the vestiges of art discovered do not excel in any respect the arts of the Indian tribes known to history. There is, therefore, no reason for us to search for an extra-limital origin through lost tribes for the arts discovered in the mounds of North America.

The tracing of the origin of these arts to the ancestors of known tribes or stocks of tribes is more legitimate, but it has limitations which are widely disregarded. The tribes which had attained to the highest culture in the southern portion of North America are now well known to belong to several different stocks, and if, for example, an attempt is made to connect the mound-builders with the Pueblo Indians no result beyond confusion can be reached until the particular stock of these village peoples is designated.

Again, it is contained in the recorded history of the country that several distinct stocks of the present Indians were mound-builders and the wide extent and vast number of mounds discovered in the United States should lead us to

suspect, at least that the mound-builders of pre-historic times belonged to many and diverse stocks. With the limitations thus indicated the identification of mound-building peoples as distinct tribes or stocks is a legitimate study, but when we consider the farther fact now established that arts extend beyond the boundaries of linguistic stocks, the most fundamental divisions we are yet able to make of the peoples of the globe, we may more properly conclude that this field promises but a meager harvest; but the origin and development of arts and industries is in itself a vast and profoundly interesting theme of study, and when North American archæology is pursued with this end in view, the results will be instructive.

Picture Writing.

On this subject three papers have been presented, as follows:

SOME INDIAN PICTOGRAPHS; by G. K. Gilbert.

INDIAN PICTOGRAPHS; by G. K. Gilbert.

INDIAN PICTOGRAPHS IN NEW MEXICO; by Miles Rock.

The pictographs of North America were made on divers substances. The bark of trees, tablets of wood, the skins of animals and the surfaces of rocks were all used for this purpose; but the great body of picture-writing as preserved to us is found on rock surfaces, as these are the most enduring.

From Dighton Rock to the cliffs that overhang the Pacific, these records are found—on boulders fashioned by the waves of the sea, scattered by river floods, or polished by glacial ice; on stones buried in graves and mounds; on faces of rock that appear in ledges by the streams; on cañon walls and towering cliffs; on mountain crags and the ceilings of caves—wherever smooth surfaces of rock are to be found in North America, there we may expect to find pictographs. So widely distributed and so vast in number, it is well to know what purposes they may serve in anthropologic science.

Many of these pictographs are simply pictures, rude etchings, or paintings, delineating natural objects, especially an-

imals, and illustrate simply the beginning of pictorial art ; others we know were intended to commemorate events or to represent other ideas entertained by their authors ; but to a large extent these were simply mnemonic—not conveying ideas of themselves, but designed more thoroughly to retain in memory certain events or thoughts by persons who were already cognizant of the same through current hearsay or tradition. If once the memory of the thought to be preserved has passed from the minds of men, the record is powerless to restore its own subject-matter to the understanding.

The great body of picture-writings is thus described ; yet to some slight extent pictographs are found with characters more or less conventional ; and the number of such is quite large in Mexico and Central America. Yet even these conventional characters are used with others less conventional in such a manner that perfect records were never made.

Hence it will be seen that it is illegitimate to use any pictographic matter of a date anterior to the discovery of the continent by Columbus for historic purposes ; but it has a legitimate use of profound interest, as these pictographs exhibit the beginning of written language and the beginning of pictorial art, yet undifferentiated ; and if the scholars of America will collect and study the vast body of this material scattered everywhere—over the valleys and on the mountain sides, from it can be written one of the most interesting chapters in the early history of mankind.

History, Customs, and Ethnic Characteristics.

On these subjects the following papers have been read :

ANCIENT MAPS OF NORTH AMERICA ; by John C. Lang.

ON THE EFFACING POWER OF TROPICAL FOREST-GROWTH IN TRINIDAD ISLAND ; by Miles Rock.

ON THE DETERMINATION OF THE AGE OF PREHISTORIC REMAINS ; by Edward P. Lull.

A STRANGE CHART ; by W. Bainbridge Hoff.

THE INDIAN LAND TITLE—THE METHOD AND CHRONOLOGY OF THIS EXTINGUISHMENT BY THE UNITED STATES ; by C. C. Royce.

WHO WERE THE MASSAWOMEKES? by A. L. Guss.

AN INQUIRY INTO THE HISTORY AND IDENTITY OF THE SHAW-
NEE INDIANS; by C. C. Royce.

SOME MODES OF INDIAN BURIAL; by P. W. Norris.

BURIAL CUSTOMS OF THE NORTH AMERICAN INDIANS; by H.
C. Yarrow.

TUCKAHOE, OR INDIAN BREAD; by J. H. Gore.

THE USE OF AGRICULTURAL FERTILIZERS BY THE AMERICAN
INDIANS AND THE EARLY ENGLISH COLONISTS; by G. Brown
Goode.

COLOR-BLINDNESS AS AFFECTED BY RACE; by Swan M. Bur-
nett.

When America was discovered by Europeans it was inhabited by great numbers of distinct tribes, diverse in languages, institutions, and customs. This fact has never been fully recognized, and writers have too often spoken of the North American Indians as a body, supposing that statements made of one tribe would apply to all. This fundamental error in the treatment of the subject has led to great confusion.

Again, the rapid progress in the settlement and occupation of the country has resulted in the gradual displacement of the Indian tribes, so that very many have been removed from their ancient homes, some of which have been incorporated into other tribes, and some have been absorbed into the body of civilized people.

The names by which tribes have been designated have rarely been names used by themselves, and the same tribe has often been designated by different names in different periods of its history and by different names in the same period of its history by colonies of people having different geographic relations to them. Often, too, different tribes have been designated by the same name. Without entering into an explanation of the causes which have led to this condition of things, it is simply necessary to assert that this has led to great confusion of nomenclature. Therefore the student of Indian history must be constantly on his guard

in accepting the statements of any author relating to any tribe of Indians.

It will be seen that to follow any tribe of Indians through post-Columbian times is a task of no little difficulty. Yet this portion of history is of importance, and the scholars of America have a great work before them.

Three centuries of intimate contact with a civilized race has had no small influence upon the pristine condition of these savage and barbaric tribes. The most speedy and radical change was that effected in the arts, industrial and ornamental. A steel knife was obviously better than a stone knife; fire-arms than bows and arrows; and textile fabrics from the looms of civilized men are at once seen to be more beautiful and more useful than the rude fabrics and undressed skins with which the Indians clothed themselves in that earlier day.

Customs and institutions changed less rapidly. Yet these have been much modified. Imitation and vigorous propaganda have been more or less efficient causes. Migrations and enforced removals placed tribes under conditions of strange environment where new customs and institutions were necessary, and in this condition civilization had a greater influence; and the progress of occupation by white men within the territory of the United States, at least, has reached such a stage that savagery and barbarism have no room for their existence, and even customs and institutions must in a brief time be completely changed, and what we are yet to learn of these people must be learned now.

But in pursuing these studies the greatest caution must be observed in discriminating what is primitive from what has been acquired from civilized man by the various processes of acculturation.

Origin of Man.

Two papers have been presented on this subject, namely:
ON THE ZOOLOGICAL RELATIONS OF MAN; by Theodore Gill.
PRE-SOCIAL MAN; by L. F. Ward.

Working naturalists postulate evolution. Zoologic research is largely directed to the discovery of the genetic relations of animals. The evolution of the animal kingdom is along multifarious lines and by diverse specializations. The particular line which connects man with the lowest forms through long successions of intermediate forms is a problem of great interest. This special investigation has to deal chiefly with relations of structure. From the many facts already recorded, it is probable that many detached portions of this line can be drawn, and such a construction, though in fact it may not be correct in all its parts, yet serves a valuable purpose in organizing and directing research.

The truth or error of such hypothetical genealogy in no way affects the validity of the doctrines of evolution in the minds of scientific men, but, on the other hand, the value of the tentative theory is brought to final judgment under the laws of evolution.

It would be vain to claim that the course of zoologic development is fully understood or even that all of its most important factors are known. So the discovery of facts and relations guided by the doctrines of evolution react upon these doctrines, verifying, modifying, and enlarging them. Thus it is that while the doctrines lead the way to new fields of discovery, the new discoveries lead again to new doctrines—increased knowledge widens philosophy, wider philosophy increases knowledge.

It is the test of true philosophy that it leads to the discovery of facts, and facts themselves can only be known as such, that is can only be properly discerned and discriminated by being relegated to their places in philosophy. The whole progress of science depends primarily upon this relation between knowledge and philosophy.

In the earlier history of mankind philosophy was the product of subjective reasoning, giving mythologies and metaphysics. When it was discovered that the whole structure of philosophy was without foundation a new order of pro-

cedure was recommended—the Baconian method—perception must precede reflection; observation must precede reason. This also was a failure. The earlier gave speculations; the later gives a mass of incoherent facts and falsehoods. The error in the earlier philosophy was not in the order of procedure between preception and reflection but in the method, it being subjective instead of objective. The method of reasoning in scientific philosophy is purely objective; the method of reasoning in mythology and metaphysics is subjective.

The difference between man and the animals most nearly related to him in structure is great. The connecting forms are no longer extant. This subject of research, therefore, belongs to the paleontologists rather than the ethnologists. The biological facts are embraced in the geological record and this record up to the present time has yielded but scant materials to serve in its solution.

It is known that man highly differentiated from lower animals in morphologic characteristics existed in early quaternary and perhaps in pliocene times and here the discovered record ends.

Language.

Six papers have been presented on linguistic subjects, namely :

INDIAN COLOR NAMES ; by Albert S. Gatschet.

THE SIGN LANGUAGE OF THE NORTH AMERICAN INDIANS ; by Garrick Mallery.

A COMPARISON OF A WRITTEN LANGUAGE WITH ONE THAT IS SPOKEN ONLY ; by Otis T. Mason.

ON THE EVOLUTION OF LANGUAGE AS EXHIBITED IN THE SPECIALIZATION OF THE GRAMMATIC PROCESSES, THE DIFFERENTIATION OF THE PARTS OF SPEECH, AND THE INTEGRATION OF THE SENTENCE ; FROM A STUDY OF INDIAN LANGUAGES ; by J. W. Powell.

THE TESTIMONY OF THE ROMANCE LANGUAGES, CONCERNING THE FORMS OF THE IMPERFECT AND PLUPERFECT SUBJUNCTIVE IN THE ROMAN FOLK-SPEECH ; by E. A. Fay.

SAVAGE AND CIVILIZED ORTHOGRAPHY ; by L. F. Ward.

In philology, North America presents the richest field in the world, for here is found the greatest number of languages distributed among the greatest number of stocks. As the progress of research is necessarily from the known to the unknown, civilized languages were studied by scholars before the languages of savage and barbaric tribes. Again, the higher languages are written and are thus immediately accessible. For such reasons, chief attention has been given to the most highly developed languages. The problems presented to the philologist, in the higher languages, cannot be properly solved without a knowledge of the lower forms. The linguist studies a language that he may use it as an instrument for the interchange of thought; the philologist studies a language to use its data in the construction of a philosophy of language. It is in this latter sense that the higher languages are unknown until the lower languages are studied, and it is probable that more light will be thrown upon the former by a study of the latter than by more extended research in the higher.

The vast field of unwritten languages has been explored but not surveyed. In a general way it is known that there are many such languages, and the geographic distribution of the tribes of men who speak them is known, but scholars have just begun the study of the languages.

That the knowledge of the simple and uncompounded must precede the knowledge of the complex and compounded, that the latter may be rightly explained, is an axiom well recognized in biology, and it applies equally well to philology. Hence any system of philology, as the term is here used, made from a survey of the higher languages exclusively will probably be a failure. "Which of you by taking thought can add one cubit unto his stature," and which of you by taking thought can add the antecedent phenomena necessary to an explanation of the language of Plato or of Spencer.

The study of astronomy, geology, physics, and biology, is in the hands of scientific men: objective methods of research are employed and metaphysic disquisitions find no place in the accepted philosophies; but to a large extent philology remains in the hands of the metaphysicians, and subjective methods of thought are used in the explanation of the phenomena observed. If philology is to be a science it must have an objective philosophy composed of a homologous classification and orderly arrangement of the phenomena of the languages of the globe.

Philologic research began with the definite purpose in view to discover in the diversities of language among the peoples of the earth a common element from which they were all supposed to have been derived, an original speech, the parent of all languages. In this philologists had great hopes of success at one time, encouraged by the discovery of the relation between the diverse branches of the Aryan stock, but in this very work methods of research were developed and doctrines established by which unexpected results were reached.

Instead of relegating the languages that had before been unclassified to the Aryan family, new families or stocks were discovered and this process has been carried on from year to year until scores or even hundreds of families are recognized, and until we may reasonably conclude that there was no single primitive speech common to mankind, but that man had multiplied and spread throughout the habitable earth anterior to the development of organized languages, that is, languages have sprung from innumerable sources after the dispersion of mankind.

The progress in language has not been by multiplication which would be but a progress in degradation under the now well-recognized laws of evolution; but it has been in integration from a vast multiplicity toward a unity. True, all evolution has not been in this direction. There has often been degradation as exhibited in the multiplicity of languages and dialects of the same stock, but evolution in

the aggregate has been integration by progress towards unity of speech, and differentiation (which must always be distinguished from multiplication), by specialization of the grammatic processes and the development of the parts of speech.

When a people once homogeneous are separated geographically in such a manner that thorough inter-communication is no longer preserved, all of the agencies by which languages change act separately in the distinct communities and produce different changes therein and dialects are established. If the separation continues such dialects become distinct languages in the sense that the people of one community are unable to understand the people of another. But such a development of languages is not differentiation in the sense in which this term is here used and often used in biology, but is analogous to multiplication as understood in biology. The differentiation of an organ is its development for a special purpose, *i. e.*, the organic specialization is concomitant with functional specialization. When paws are differentiated into hands and feet, with the differentiation of the organs there is a concomitant differentiation in the functions.

When one language becomes two, the same function is performed by each and is marked by the fundamental characteristic of multiplication, *i. e.*, degradation; for the people originally able to communicate with each other can no longer thus communicate; so that two languages do not serve as valuable a purpose as one. And further, neither of the two languages has made the progress one would have made, for one would have been developed sufficiently to serve all the purposes of the united peoples in the larger area inhabited by them, and, *ceteris paribus*, the language spoken by many people scattered over a large area must be superior to one spoken by a few people inhabiting a small area.

It would have been strange indeed had the primitive assumption in philology been true and the history of language exhibited universal degradation.

In the remarks on the "Origin of Man," the statement was made that mankind was distributed throughout the habitable earth in some geologic period anterior to the present and anterior to the development of other than the rudest arts. Here, again, we reach the conclusion that man was distributed throughout the earth anterior to the development of organized speech.

In the presence of these two great facts the tracing of genetic relationship among human races through arts, customs, institutions and traditions will appear, for all of these must have been developed after the dispersion of mankind. Analogies and homologies in these phenomena must be accounted for in some other way. Somatology proves the unity of the human species; that is the evidence upon which this conclusion is reached is morphologic; but in arts, customs, institutions and traditions abundant corroborative evidence is found. The individuals of the one species though inhabiting diverse climes, speaking diverse languages and organized into diverse communities, have progressed in a broad way by the same stages, have had the same arts, customs, institutions and traditions in the same order, limited only by the degree of progress to which the several tribes have attained and modified only to a limited extent by variations in environment.

If any ethnic classification of mankind is to be established more fundamental than that based upon language, it must be upon physical characteristics, and such must have been acquired by profound differentiation anterior to the development of languages, arts, customs, institutions, and traditions. The classifications hitherto made on this basis are unsatisfactory, and no one now receives wide acceptance. Perhaps farther research will clear up doubtful matters and give an acceptable grouping; or it may be that such research will result only in exhibiting the futility of the effort.

The history of man, from the lowest tribal condition to the highest national organization, has been a history of con-

stant and multifarious admixture of strains of blood ; of admixture, absorption, and destruction of languages with general progress toward unity ; of the diffusion of arts by various processes of acculturation ; and of admixture and reciprocal diffusion of customs, institutions, and traditions. Arts, customs, institutions, and traditions extend beyond the boundaries of languages and serve to obscure them ; and the admixture of strains of blood has obscured primitive ethnic divisions, if such existed.

If the physical classification fails, the most fundamental grouping left is that based on language ; but for the reasons already mentioned and others of like character, the classification of languages is not, to the full extent, a classification of peoples.

It may be that the unity of the human race is a fact so profound that all attempts at a fundamental classification to be used in all the departments of anthropology will fail, and that there will remain multifarious groupings for the multifarious purposes of the science ; or, otherwise expressed, that languages, arts, customs, institutions, and traditions may be classified, and that the human family will be considered as one race.

Mythology.

In this department the following papers have been presented :

COMPARATIVE MYTHOLOGY OF THE TWO INDIES ; by Garrick Mallery.

THE "TAR BABY," AND THE "THREE CRANBERRIES"—Two Folk-Lore Stories; by J. W. Powell.

FOUR CREATIONS OF MANKIND—A Tuálati Myth ; by A. S. Gatschet.

SUPERSTITIONS ; by A. S. Gatschet.

Here again America presents a rich field for the scientific explorer. It is now known that each linguistic stock has a distinct mythology and as in some of these stocks there are

many languages differing to a greater or less extent, so there are many like differing mythologies.

As in language, so in mythology, investigation has proceeded from the known to the unknown—from the higher to the lower mythologies. In each step of the progress of opinion on this subject a particular phenomenon may be observed. As each lower status of mythology is discovered it is assumed to be the first in origin, the primordial mythology, and all lower but imperfectly understood mythologies are interpreted as degradations from this assumed original belief. Thus polytheism was interpreted as a degeneracy from monotheism, nature worship from psychotheism, zoölotry from ancestor worship; and in order monotheism has been held to be the original mythology, then polytheism, then physitheism, or nature worship, then ancestor worship.

With a large body of mythologists nature-worship is now accepted as the primitive religion; and with another body, equally as respectable, ancestor worship is primordial. But nature worship and ancestor worship are concomitant parts of the same religion, and belong to a status of culture highly advanced and characterized by the invention of conventional pictographs. In North America we have scores or even hundreds of systems of mythology, all belonging to a lower state of culture.

Let us hope that American students will not fall into this line of error by assuming that zoötheism is the lowest stage, because this is the status of mythology most widely spread on the continent.

Mythology is primitive philosophy. A mythology, that is the body of myths current among any people and believed by them, comprises a system of explanations of all the phenomena of the universe discerned by them; but such explanations are always mixed with much extraneous matter, chiefly incidents in the history of the personages who were the heroes of mythologic deeds.

Every mythology has for its basis a theology—a system of gods who are the actors, and to whom are attributed the phe-

nomena to be explained, for the fundamental postulate in mythology is "some one does it," such being the essential characteristic of subjunctive reasoning. As peoples pass from one stage of culture to another, the change is made by developing a new sociology with all its institutions, by the development of new arts, by evolution of language, and in a degree no less by a change in philosophy; but the old philosophy is not supplanted. The change is made by internal growth and external accretion.

Fragments of the older are found in the newer. This older material in the newer philosophy is often used for curious purposes by many scholars. One such use I wish to mention here. The nomenclature which has survived from the earlier state is supposed to be deeply and occultly symbolic and the mythic narratives to be deeply and occultly allegoric. In this way search is made for some profoundly metaphysic cosmogony, some ancient beginning of the mythology is sought in which mystery is wisdom and wisdom is mystery.

The objective or scientific method of studying a mythology is to collect and collate its phenomena simply as it is stated and understood by the people to whom it belongs. In tracing back the threads of its historical development the student should expect to find it more simple and child-like in every stage of his progress.

It is vain to search for truth in mythologic philosophy, but it is important to search for veritable philosophies that they may be properly compared and that the products of the human mind in its various stages of culture may be known, important in the reconstruction of the history of philosophy and important in furnishing necessary data to psychology. No labor can be more fruitless than the search in mythology for true philosophy and the efforts to build up from the terminology and narratives of mythologies an occult symbolism and system of allegory is but to create a new and fictitious body of mythology.

There is a symbolism inherent in language and found in

all philosophy, true or false, and such symbolism was cultivated as an occult art in the early history of civilization when picture-writing developed into conventional writing; and symbolism is an interesting subject for study but it has been made a beast of burden to carry packs of metaphysic nonsense.

Sociology.

In Sociology the following papers have been presented:

THE OLD ROMAN SENATE: A STUDY OF DELIBERATIVE ASSEMBLIES; by J. Howard Gore.

FRENCH AND INDIAN HALF-BREEDS OF THE NORTHWEST; by Victor Havard.

POISONED WEAPONS OF NORTH AND SOUTH AMERICA; by W. J. Hoffman.

THE DEVELOPMENT OF DELIBERATIVE GOVERNMENT AMONG THE NORTH AMERICAN INDIANS; by J. Howard Gore.

WYANDOT GOVERNMENT: A SHORT STUDY OF TRIBAL SOCIETY; by J. W. Powell.

SCHEME OF THE TENTH CENSUS FOR THE ENUMERATION OF UNTAXED INDIANS; by Garrick Mallery.

CIVILIZATION; by M. B. W. Hough.

Here again North America presents a wide and interesting field to the investigator for it has within its extent many distinct governments and these governments, so far as investigations have been carried, are found to belong to a type more primitive than any of the feudalities from which the civilized nations of the earth sprang as shown by concurrently recorded history.

Yet in this history many facts have been discovered suggesting that feudalities themselves had an origin in something more primitive. In the study of the tribes of the world, a multitude of sociologic institutions and customs have been discovered and in reviewing the history of feudalities it is seen that many of their important elements are survivals from tribal society.

So important are these discoveries that all human history has to be re-written, the whole philosophy of history reconstructed. Government does not begin in the ascendancy of chieftains through prowess in war, but in the slow specialization of executive functions from communal associations based on kinship; deliberative assemblies do not start in councils gathered by chieftains, but councils precede chieftaincies. Law does not begin in contract, but is the development of custom. Land tenure does not begin in grants from the monarch, or the feudal lord, but a system of tenure in common by gentes or tribes is developed into a system of tenure in severalty. Evolution in society has not been from militancy to industrialism, but from organization based on kinship to organization based on property, and alongside of the specializations of the industries of peace the arts of war have been specialized.

So, one by one, the theories of metaphysic writers on sociology are overthrown, and the facts of history are taking their place and the philosophy of history is being erected out of materials accumulating by objective studies of mankind.

Psychology.

One paper on psychology has been presented, namely :

IS THOUGHT POSSIBLE WITHOUT LANGUAGE ?—CASE OF A DEAF MUTE ; by Samuel Porter.

Psychology has hitherto been chiefly in the hands of subjective philosophers and is the last branch of Anthropology to be treated by scientific methods. But of late years sundry important labors have been performed with the end in view to give this department of philosophy a basis of objective facts ; especially the organ of the mind has been studied and the mental operations of animals have been compared with those of men and in various other ways the subject is receiving scientific attention.

The new psychology in process of construction will have a three-fold basis : A physical basis on phenomena presented by the organ of the mind as shown in man and the lower ani-

mals; a linguistic basis as presented in the phenomena of language, which is the instrument of mind; a functional basis as exhibited in operations of the mind.

The phenomena of the third class may be arranged in three sub-classes. First, the operations of mind exhibited in individuals in various stages of growth, various degrees of culture and in various conditions, normal and abnormal; second, the operations of mind as exhibited in technology, arts and industries; third, the operations of mind as exhibited in philosophy; and these are the explanations given of the phenomena of the universe. On such a basis a scientific psychology must be erected.

The transactions of this Society for the past two years exhibit evidence that Anthropology in its various branches is already receiving attention from the objective stand-point; subjective disquisitions find but little place therein and the series of papers constitute a valuable body of contributions to the science.

As methods of study are discovered a vast field opens to the American scholar. Now, as at all times in the history of civilization, there has been no lack of interest in this subject, and no lack of speculative writers; but there is a great want of trained observers and acute investigators.

If we lay aside the mass of worthless matter which has been published and consider only the material used by the most careful writers, we find on every hand that conclusions are vitiated by a multitude of errors of fact of a character the most simple. Yesterday I read an article on the "Growth of Sculpture," by Grant Allen, that was charming; yet therein I found this statement:

So far as I know, the Polynesians and many other savages have not progressed beyond the full-face stage of human portraiture above described. Next in rank comes the drawing of a profile, as we find it among the Eskimos and the bushmen. Our own children soon attain to this level, which is one degree higher than that of the

full face, as it implies a special point of view, suppresses half the features, and is not diagrammatic or symbolical of all the separate parts. Negroes and North American Indians cannot understand profile : they ask what has become of the other eye.

Perhaps Mr. Allen derives his idea of the inability of the Indians to understand profiles from a statement of Catlin, which I have seen used for this, and other purposes, by different Anthropologists until it seems to have become a *favorite fact*.

Turning to Catlin's " Letters and Notes on the Manners, Customs, and Condition of the North American Indians," (Vol. 2, page 2,) we find him saying :

After I had painted these and many more, whom I have not time at present to name, I painted the portrait of a celebrated warrior of the Sioux, by the name of Mah-to-chee-ga, (the little bear), who was unfortunately slain in a few moments after the picture was done, by one of his own tribe ; and which was very near costing me my life for having painted a side view of his face, leaving one-half of it out of the picture, which had been the cause of the affray ; and supposed by the whole tribe to have been intentionally left out by me, as "good for nothing." This was the last picture that I painted amongst the Sioux, and the last, undoubtedly, that I shall ever paint in that place. So tremendous and so alarming was the excitement about it, that my brushes were instantly put away, and I embarked the next day on the steamer for the sources of the Missouri, and was glad to get underweigh.

Subsequently Mr. Catlin elaborates this incident into the "Story of the Dog." Vol. 2, page 188 *et seq.*

Now, whatsoever of truth or of fancy there may be in this story it cannot be used as evidence that the Indians could not understand or interpret profile pictures, for Mr. Catlin himself gives several plates of Indian pictographs exhibiting profile faces. In my cabinet of pictographs I have hundreds of side views made by Indians of the same tribe of which Mr. Catlin was speaking.

It should never be forgotten that travelers and other persons who write for the sake of making good stories must be used with the utmost caution. Catlin is only one of a thousand such who can be used with safety only by persons so thoroughly acquainted with the subject that they are able

to divide facts actually observed from creations of fancy. But Mr. Catlin must not be held responsible for illogical deductions even from his facts. I know not how Mr. Allen arrived at his conclusion, but I do know that pictographs in profile are found among very many, if not all the tribes of North America.

Now, for another example. Peschel, in "The Races of Man" (page 151), says:

The transatlantic history of Spain has no case comparable in iniquity to the act of the Portuguese in Brazil, who deposited the clothes of scarlet-fever or small-pox patients on the hunting grounds of the natives, in order to spread the pestilence among them; and of the North Americans who used strychnine to poison the wells which the Redskins were in the habit of visiting in the deserts of Utah; of the wives of Australian settlers, who, in times of famine, mixed arsenic with the meal which they gave to starving natives.

In a foot note on the same page, Burton is given as authority for the statement that the people of the United States poisoned the wells of the redskins.

Referring to Burton, in "The City of the Saints" (page 474), we find him saying:

The Yuta claim, like the Shoshonee, descent from an ancient people that immigrated into their present seats from the Northwest. During the last thirty years they have considerably decreased according to the mountaineers, and have been demoralized mentally and physically by the emigrants: formerly they were friendly, now they are often at war with the intruders. As in Australia, arsenic and corrosive sublimate in springs and provisions have diminished their number.

Now, why did Burton make this statement? In the same volume he describes the Mountain Meadow massacre, and gives the story as related by the actors therein. It is well known that the men who were engaged in this affair tried to shield themselves by diligently publishing that it was a massacre by Indians incensed at the travelers because they had poisoned certain springs at which the Indians were wont to obtain their supplies of water. When Mr. Burton was in Salt Lake City he, doubtless, heard these stories.

So the falsehoods of a murderer, told to hide his crime,

have gone into history as facts characteristic of the people of the United States in their treatment of the Indians. In the paragraph quoted from Burton some other errors occur. The Utes and Shoshonis do not claim to have descended from an ancient people that immigrated into their present seats from the northwest. Most of these tribes, perhaps all, have myths of their creation in the very regions now inhabited by them.

Again, these Indians have not been demoralized mentally or physically by the emigrants, but have made great progress toward civilization.

The whole account of the Utes and Shoshonis given in this portion of the book is so mixed with error as to be valueless, and bears intrinsic evidence of having been derived from ignorant frontiersmen.

Turning now to the first volume of Spencer's *Principles of Sociology* (page 149) we find him saying:

And thus prepared, we need feel no surprise on being told that the Zuni Indians require "much facial contortion and bodily gesticulation to make their sentences perfectly intelligible;" that the language of the Bushman needs so many signs to eke out its meaning, that "they are unintelligible in the dark;" and that the Arapahos "can hardly converse with another in the dark."

When people of different languages meet, especially if they speak languages of different stocks, a means of communication is rapidly established between them composed partly of signs and partly of oral words, the latter taken from one or both of the languages but curiously modified so as hardly to be recognized. Such conventional languages are usually called "jargons," and their existence is rather brief.

When people communicate with each other in this manner oral speech is greatly assisted by sign language, and it is true that darkness impedes their communication. The great body of frontiersmen in America who associate more or less with the Indians depend upon jargon methods of communication with them; and so we find that various writers and travellers describe Indian tongues by the characteristics of this jargon speech. Mr. Spencer usually does.

The Zuni and the Arapaho Indians have a language with a complex grammar and copious vocabulary well adapted to the expression of the thoughts incident to their customs and status of culture, and they have no more difficulty in conveying their thoughts with their language by night than Englishmen have in conversing without gaslight. An example from each of three eminent authors has been taken to illustrate the worthlessness of a vast body of anthropologic material to which even the best writers resort.

Anthropology needs trained devotees with philosophic methods and keen observation to study every tribe and nation of the globe almost *de novo*; and from materials thus collected a science may be established.

CONSTITUTION.

ARTICLE I.—*Name.*

The name of this Society shall be “THE ANTHROPOLOGICAL SOCIETY OF WASHINGTON.”

ARTICLE II.—*Object.*

The object of this Society shall be to encourage the study of the Natural History of Man, especially with reference to America, and shall include Archæology, Somatology, Ethnology, and Philology.

ARTICLE III.—*Members.*

The members of this Society shall be persons who are interested in Anthropology, and shall be divided into three classes: Active, Corresponding, and Honorary. The Active members shall be those who reside in Washington, or in its vicinity, and who shall pay the dues required by Article XV; Corresponding members shall be those who are engaged in anthropological investigations in other localities; Honorary members shall be those who have contributed by authorship or patronage to the advancement of Anthropology. Corresponding or Honorary members may become Active members by paying the fee required by Article XV.

All members shall be elected by ballot, as follows: The name of the candidate shall be recommended to the Council in writing, by two members. If a majority of the Council favor the election, the name shall be presented to the Society, and a vote of a majority of the Active members present at a regular meeting shall be necessary to an election.

No person shall be entitled to the privileges of Active membership before signing this constitution.

ARTICLE IV.—*Officers.*

The officers of this Society shall be a President, four Vice-Presidents, a Corresponding Secretary, a Recording Secretary, a Treasurer, and a Curator, all of whom, together with six other Active members, shall constitute a Council, all to be elected by ballot at each annual meeting. The officers shall serve for one year, or until their successors are elected.

ARTICLE V.—*The Council.*

No business shall be transacted by the Society, and no communication received or published in the name of the Society, that has not first been referred to the Council, five members of which shall constitute a quorum.

They shall act upon all nominations for membership, shall have direction of the finances, audit the accounts of the Treasurer, Corresponding Secretary, and Curator, and provide a proper programme for regular and special meetings. They shall meet one hour before the regular sessions of the Society, and at such other times as they may be called together by the President. They may call special meetings of the Society.

ARTICLE VI.—*The Sections.*

For active operations the Society shall be divided into four sections, as follows: Section A, Archæology; Section B, Somatology; Section C, Ethnology; Section D, Philology. The Vice-Presidents of the Society shall be *ex officio* chairmen of these sections respectively, and shall be designated by the President to their sections after their election. It shall be the duty of these sections to keep the Society informed upon the progress of research in their respective fields, to make special investigations when requested by the Council, to an-

nounce interesting discoveries, to collect specimens, manuscripts, publications, newspaper clippings, &c., and in every way to foster their divisions of the work.

All papers presented to the sections shall be referred to the Council, and through it to the Society.

ARTICLE VII.—*The President.*

The President, or in his absence, one of the Vice-Presidents, shall preside over the meetings of the Society and of the Council, and shall appoint all committees in the Council and in the Society.

ARTICLE VIII.—*The Vice-Presidents.*

The Vice-Presidents shall respectively preside over the sections to which they have been designated, and represent such section in the Council and in the Society.

All papers from a section shall be referred to the Council through its Vice-President.

ARTICLE IX.—*The Corresponding Secretary.*

It shall be the duty of the Corresponding Secretary to receive and answer all letters of the Society, to give due notice of all meetings, regular and special, to receive all donations to the Society other than money, acknowledge the receipt thereof, and deliver them to the Curator.

ARTICLE X.—*The Recording Secretary.*

The Recording Secretary shall keep the minutes of the regular and special meetings of the Society, and of the Council; shall keep a list of Active, Corresponding, and Honorary members, with their residences, and shall inspect and count all ballots.

ARTICLE XI.—*Duties of the Treasurer.*

The Treasurer shall receive and have charge of all moneys; he shall deposit the funds as directed by the Council, and

shall not expend any money except as ordered by the Council. He shall notify members in writing when their dues have remained unpaid for six months.

ARTICLE XII.—*The Curator.*

The Curator shall have charge of all books, pamphlets, photographs, clippings and other anthropological material not deposited in accordance with Article XVI, in the National Museum, or the Army Medical Museum; he shall keep a record of them in a book provided by the Society; he shall keep a card subject index of anthropological facts, to which the members are all expected to contribute.

ARTICLE XIII.—*Meetings.*

The regular meetings of the Society shall be held on the first and third Tuesday of each month from October to June inclusive. An annual meeting for the election of officers shall be held on the third Tuesday of January in each year, at which only active members who are not in arrears for fees shall be entitled to vote. The business of the Society shall be conducted in accordance with the established rules of parliamentary practice. Papers read shall be limited to twenty minutes, after which the subject shall be thrown open for discussion, remarks thereon to be limited to five minutes for each speaker. At the first meeting in February the retiring president shall deliver an address upon the work of the Society during the preceding year. Ten active members present at any meeting shall constitute a quorum.

ARTICLE XIV.—*Visitors.*

Members may invite strangers interested in Anthropology to attend any meeting excepting the annual election; but a resident of the District of Columbia shall not be invited more than once during a year, except with the consent of the Council.

ARTICLE XV.—*Fees.*

Each member, on joining, shall pay the sum of two dollars, and two dollars for each year thereafter, commencing with the first of January ensuing. The names of members failing to pay their fees one month after written notice from the Treasurer as provided in Article XI, shall be dropped from the roll.

ARTICLE XVI.—*Donations.*

It shall be the duty of all members to seek to increase and perfect the materials of anthropological study in the national collections at Washington. All donations of specimens, books, pamphlets, maps, photographs, and newspaper clippings, shall be received by the Corresponding Secretary and delivered to the Curator, who shall exhibit them before the Society at the next regular meeting after their reception, and shall make such abstract or entry concerning them in a book provided by the Society, as will secure their value as materials of research; after which all archæological and ethnological materials shall be deposited in the National Museum, in the name of the donor and of the Society; all crania and somatic specimens, in the Army Medical Museum; all books, pamphlets, photographs, clippings, and abstracts, in the archives of the Society.

ARTICLE XVII.—*Amendments.*

This constitution shall not be amended except by a three-fourths vote of the active members present at the annual meeting for the election of officers, and after notice of the proposed change shall have been given in writing at a regular meeting of the Society, at least one month previously.

ARTICLE XVIII.—*Order of Business.*

The order of business at each regular meeting shall be :

1. Reading of the minutes of the last meeting.
2. Report of the Council upon membership.
3. Report of the Corresponding Secretary.
4. Report of the Curator.
5. Reading of papers and discussions.
6. Notes and queries.

OFFICERS OF THE SOCIETY.

1881.

PRESIDENT	J. W. POWELL.
VICE PRESIDENTS	{ GARRICK MALLERY. OTIS T. MASON. H. C. YARROW. Vacancy by the death of Geo. A. Otis.
CORRESPONDING SECRETARY	C. C. ROYCE.
RECORDING SECRETARY	LESTER F. WARD.
TREASURER	J. HOWARD GORE.
CURATOR	W. J. HOFFMAN.
COUNCIL	{ J. C. WELLING. F. A. SEELY. MILES ROCK. H. L. THOMAS. J. MEREDITH TONER. E. A. FAY.

ACTIVE MEMBERS.

MARCH 15, 1881.

ABBE, CLEVELAND
ADAMS, A. WELLINGTON
ANTISELL, THOS.
AUGUSTA, A. T.
BAIRD, SPENCER F.
BAKER, FRANK
BAKER, HENRY M.
BAYNE, I. W.
BESSELS, EMIL
BIGELOW, OTIS
BRANSFORD, J. F.
BROWN, JOS. S.
BURDICK, EDSON A.
BURNETT, SWANN M.
CARPENTER, F. D.
CHICKERING, J. W.
CLARK, S. N.
COUES, ELLIOTT
CUSHING, FRANK H.
DeHASS, WILLS
DORSEY, J. O.
DOWNMAN, R. W.
DUBOIS, C. L.
DWIGHT, THEO. F.
EATON, JOHN
FAY, E. A.
FLETCHER, ROBERT
FLINT, WESTON
FLOYD, FRED. W.
FRISTOE, E. T.
GALLAUDET, E. M.
GANNETT, HENRY
GATSCHET, A. S.
GEDNEY, C. D.
GILBERT, G. K.
GILLETTE, EDWARD
GODWIN, H. P.
GOODE, G. BROWN
GORE, J. HOWARD
GREEN, J. M.
GUSS, A. L.
HAGNER, CHAS. E.
HAMPSON, THOMAS
HENSHAW, H. W.
HICKOX, CHAUNCEY
HOFF, L. B.
HOFFMAN, C. W.
HOFFMAN, W. J.
HOLMES, WM. H.
HOUGH, M. B. W.
HOWGATE, H. W.
HUTCHINSON, DAVID
JOHNSON, J. TABER
KERR, MARK B.

KIMBALL, W. W.
KING, A. F. A.
LANDERS, THOS.
LANG, JOHN C.
LARCOMBE, J. H.
LEE, WILLIAM
LEECH, DANIEL
LIBBEY, JOSEPH
LULL, E. P.
MACARTHUR, ARTHUR
MACCAULEY, CLAY
MACKEY, A. G.
McGUIRE, J. D.
MALLERY, GARRICK
MASON, OTIS T.
MONTAGUE, A. P.
MORGAN, J. E.
NICHOLS, H. E.
NORRIS, P. W.
NORRIS, J. A.
PACKARD, R. L.
PETROFF, IVAN
PILLING, J. C.
PORTER, SAMUEL
POWELL, J. W.
PRENTISS, D. W.
REISINGER, W. W.
REYNOLDS, ELMER R.
RHEES, WILLIAM J.
RILEY, C. V.
RITCHIE, LOUIS W.
ROCK, MILES
ROYCE, C. C.
SEELY, F. A.
SHOEMAKER, GEORGE
SMILEY, C. W.
SMITH, J. D.
SOWERS, Z. T.
SPILLER, J. C.
STANTON, J. O.
STEPHENSON, JAMES
SWALLOW, BENJ.
THOMAS, H. L.
THOMPSON, J. FORD
TONER, J. MEREDITH
TRIPLETT, W. H.
TRUE, FRED. W.
WARD, LESTER F.
WARREN, CHARLES
WELLING, J. C.
WHITE, CHARLES A.
WILSON, JOSEPH M.
WOLF, SIMON
YARROW, H. C.

CORRESPONDING MEMBERS.

BERLIN, A. F	Allentown, Pa.
CARTER, DRAKE	Versailles, Ky.
COMFORT, G. C	Syracuse, N. Y.
COWEN, FRANK	Greensburg, Pa.
DALRYMPLE, E. A	Baltimore, Md.
DE KOVEN, JAMES	Racine, Wis.
FARQUHARSON, R. J	Davenport, Iowa.
HANCOCK, A. M	Cresswell, Md.
HINMAN, S. D	Santee Agency, Neb.
HOUGH, FRANKLIN B	Lowville, N. Y.
HOY, P. H	Racine, Wis.
KEIFER, J. WARREN	Springfield, O.
MARSH, HORACE E <i>Hayden</i>	Brownsville, Pa. <i>1000 1000 1000</i>
MORRIS, J. G	Baltimore, Md.
REDDING, B. B	San Francisco, Cal.
SLAFTER, EDMUND F	Boston, Mass.
WHITFORD, E. L	Milton, Wis.
WINCHELL, ALEXANDER	Ann Arbor, Mich.

HONORARY MEMBERS.

MATTHEWS, WASHINGTON	Fort Wingate, N. Mex.
----------------------------	-----------------------

INDEX.

A

Accotinck, Ossuary at.....	92
Address, Annual, of the President.....	113
Antiquities, Observations on Aztec and Guatemalan.....	6
Archæologic Research in U. S., progress of.....	9
Arrow-head making.....	7
Assemblies, Deliberative, a study of, &c.....	9
Aztec and Guatemalan Antiquities, Observations on.....	6

B

Bread Indian, or Tuckahoe	101
Burial Customs of the North American Indians.....	58
Burial Indian, Some modes of	4
Burnett, Swan M	7

C

Celts, Turtle-back, and their uses.....	30
Cemeteries, Aboriginal, near Piscataway, Md	14
Census, Tenth, Scheme of, for enumeration of untaxed Indians	92
Chart, a strange	33
Civilization.....	100
Color-blindness as affected by Race.....	7
Color names, Indian	10
Creations of mankind, The Four—A Tualati Myth.....	60
Cushing, Frank H.....	3-7

D

De Hass, Wills	9
Deliberative Government, Development of, among North American Indians	58

E

Effacing power of tropical forest growth on Trinidad Island	26
Evolution of language, &c.....	85

F

Fay, E. A	72
Fertilizers, Early use of, by Indians and Colonists	21
Forest growth, Tropical, effacing power of	26
French and Indian Half-breeds of the Northwest	12

G

Gatschett, Albert S	10-60-103
Gilbert, G. K	4-7-9
Gill, Theodore	15
Goode, G. Browne	21
Gore, J. Howard	58-101
Government, Deliberative, development of, among North American Indians	58
Guatemalan and Aztec Antiquities, Observations on	6
Guss, A. L	71

H

Half-breeds, French and Indian, of the Northwest	12
Haovard, Victor	12
Hoff, W. Bainbridge	33
Hoffman, W. J	21
Hough, M. B. W	100

I

Imperfect and Pluperfect Subjunctive, Forms of, in Roman Folk Speech, &c	72
Indian and French Half-breeds of the Northwest	12
Indian, Burial Modes of	4
" Color names	10
" Mounds in the Shenandoah Valley	103
" Pictographs	4-7
" Pictographs in New Mexico	10
" Title, The—The method and chronology of its extinguishment by the United States	64
Indians, North American, Burial Customs of	58
" " " Develpment of deliberative government among	58
" Shawnee, An inquiry into the history and identity of	94
" The Sign Language of the North American	19
" Untaxed, Scheme of Tenth Census for enumeration of	92
Indies, Comparative Mythology of the two	12

L

Lang, John C.....	25
Language, Comparison between written and spoken.....	21
" Is Thought possible without.....	74
" Sign The, of the North American Indians.....	19
" The Evolution of.....	35
Lull, Edward P.....	27

M

McGuire, J. D.....	31
Mallery, Garrick.....	12-17-19-92
Mankind, The Four Creations of—A Tualati Myth.....	60
Man, On the Zoological relations of.....	15
Man, Pre-social.....	68
Maps, Ancient of North America.....	25
Mason, Otis T.....	6-17-21
Massawomekes, Who were the.....	71
Mounds, Indian, in the Shenandoah Valley.....	103
Mythology, Comparative, of the two Indies.....	12

N

Norris, P. W.....	4
-------------------	---

O

Orthopy, Savage and Civilized.....	106
Ossuary at Accotink, Va.....	92

P

Paint Quarry, Aboriginal.....	11
Pictographs, Indian.....	4-7
" " in New Mexico.....	10
Piscataway, Md., Aboriginal Cemeteries near.....	14
Poisoned Weapons of North and South America.....	21
Pope's Creek, Md., Aboriginal Shell-Heaps at.....	23
Porter, Samuel.....	74
Powell, J. W.....	30-35-76-113
Pre-Historic remains, Determination of age of.....	27
" " " in Mexico.....	29
President's Annual Address.....	113
Pre-Social Man.....	68

Q

Quarry, Aboriginal Paint.....	11
-------------------------------	----

R

Relic Hunting	3
Remains, Pre-Historic, Determination of age of	27
Remains, Pre-Historic, in Mexico	29
Reynolds, Elmer R. 11-14-18-23-30-72-92-103	
Riley, C. V.	29
Rock, Miles	10-26
Romance Languages, testimony of the, concerning forms of Imperfect and Pluperfect Subjunctive in the Roman Folk-speech.....	73
Royce, C. C.	64-94

S

Senate, The Old Roman, a study of Deliberative Assemblies	9
Shawnee Indians, An inquiry into the history and indentity of	94
Shell-Heaps, Aboriginal, at Popes' Creek, Md.	23
“ of South River, Md.	31
Shenandoah Valley, Indian Mounds in	103
Sign Language, The, of the North American Indians	19
Soap-Stone Quarry, Dunbarton Aboriginal	72
South River, Md., Shell-heaps of....	31
Subjunctive, Imperfect and Pluperfect, Forms of in Roman Folk Speech &c.	72
Superstitions	103

T

Tar Baby	30
Thought, Is it possible without Language	74
Three Cranberries	30
Title, The Indian, The method and chronology of its extinguishment by the U. S.	64
Trinidad Island, Effacing power of tropical forest growth in.	26
Tropical Forest-growth in Trinidad Island, Effacing power of.	26
Tualati Myth, A—The four creations of mankind	60
Tuckahoe or Indian Bread	101
Turtle-back Celts and their uses	30

W

Ward, Lester F.	68-106
Weapons, Poisoned of N. and S. America	21
Wyandotte Government, A short study of tribal society	76

Y

Yarrow, H. C.	58
--------------------	----

Z

Zoological relations of man, On the	15
---	----

L.SOC.120.146.200.1

Abstract of transactions of the Ant
Tozzer Library



AU11741

This book should be returned
to the Library on or before the
last date stamped below.
Please return promptly.

MAY 29 2002

